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UNIVERSITY OF PENNSYLVANIA CATALOGUE

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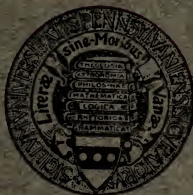
SCHOOL OF MEDICINE

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(1910-1911)

Announcements for the 146th Annual Session

1911-1912



Founded 1740

PHILADELPHIA

PUBLISHED BY THE UNIVERSITY

BI-MONTHLY

MAY, 1911

Entered at the Philadelphia, Pa., Post-Office as Second-Class Matter

SPECIAL NOTICE.

Copies of the University Catalogue (containing detailed information concerning all the Schools) may be obtained **ONLY** upon application to the Secretary of the University, Room 114, College Hall.

To any alumnus of the University, the Catalogue will be sent upon application on receipt of name, class and address.

The special announcement of the following divisions of the University will be sent upon application to the appropriate Dean:

THE COLLEGE, including

THE SCHOOL OF ARTS.

THE TOWNE SCIENTIFIC SCHOOL.

THE WHARTON SCHOOL OF FINANCE AND COMMERCE.

THE SUMMER SCHOOL.

THE COLLEGE COURSES FOR TEACHERS.

THE GRADUATE SCHOOL.

THE LAW SCHOOL.

THE SCHOOL OF MEDICINE.

THE SCHOOL OF DENTISTRY.

THE SCHOOL OF VETERINARY MEDICINE.

UNIVERSITY OF PENNSYLVANIA

CATALOGUE

PRESIDENT'S OFFICE

SCHOOL OF MEDICINE

(1910-1911)

Announcements for the 146th Annual Session

1911-1912



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THE UNIVERSITY.

General Information.

LOCATION.

The buildings of the University of Pennsylvania are situated in Philadelphia, on property covering an area of over fifty-nine acres. In addition to this land the University has recently acquired from the city an adjoining tract comprising fifty-five acres, more or less. The University may be reached from the various railroad stations as follows: From the West Philadelphia station of the Pennsylvania Railroad, on foot west on Woodland avenue, a walk of less than ten minutes; from the Philadelphia and Reading Terminal station by the electric subway, west to Thirty-second street, thence on foot west on Woodland avenue; or from the Baltimore and Ohio Railroad station by a walk of one square south to Walnut street, thence by car over the bridge west to Thirty-fourth street.

APPLICATIONS FOR CATALOGUES, ETC.

Applications for copies of the annual University Catalogue should be addressed to the Secretary of the University of Pennsylvania, Philadelphia, Pa.

The University also issues pamphlets relating to the College and the several Schools or to individual Departments and often containing information not found in the Catalogue. Inquirers interested in special branches of work only are advised to apply for these pamphlets, not for the Catalogue.

All letters of inquiry regarding the internal regulations and requirements in the College or each separate School of the University should be addressed to the Dean of that section (see *Administrative officers*, following), and *not* to the Secretary of the University.

ACCOMMODATIONS FOR STUDENTS.

Lodging for students to the number of more than eight hundred is provided in the present dormitory system, which comprises an extended group of contiguous houses fronting upon three open courts. Plans of the dormitories, prices, and other details may be obtained upon application to the Bursar of the University, College Hall.

Board and lodging may be obtained also in the immediate vicinity of the University. Upon application at the offices of the Bursar, College Hall, lists of approved boarding houses may be seen.

HOUSTON HALL.

Houston Hall is the home of the Houston Club, to membership in which any member of the University is eligible. The fee for active membership in the club is \$3.00 per annum.

Its purposes are to provide for the students a place where all may meet socially on common ground, and to furnish every available facility for healthy recreation and amusement in leisure hours. The equipment of the Hall includes a reading-room, with a large number of periodicals and newspapers; smoking-rooms, billiard and pool tables, tables for chess and checkers, a correspondence room, bowling alleys, shuffle boards, a bath-room, including shower and needle baths, and a swimming pool; athletic trophy rooms; a large auditorium with grand organ; rooms for the University papers and other organizations; a dark room for amateur photographers and many other rooms for general purposes.

The Christian Association, which has its headquarters in Houston Hall, is prepared to furnish prospective students, through its Secretary, full information with regard to the various undergraduate social activities, both secular and religious.

A Students' Employment Bureau is affiliated with the Christian Association; address Dana G. How, Director, Houston Hall.

UNIVERSITY OF PENNSYLVANIA.

CHRONOLOGICAL TABLE.

- 1740—"Charity School" founded.
1749—The "Academy" established, with which the Charity School was combined.
1753—Charter granted by Thomas and Richard Penn, incorporating "The Academy and Charitable School."
1755—"Confirmatory Charter" granted by Thomas and Richard Penn, incorporating "The College, Academy and Charitable School."
1765—School of Medicine founded.

From September, 1777, to June, 1778, owing to the occupation of Philadelphia by British troops, recitations and lectures were suspended.

- 1779—Withdrawal of the chartered rights and privileges of The College by the State Assembly, and incorporation of the "University of the State of Pennsylvania."
1789—Restoration of its chartered rights and privileges to The College.
1790—Law School founded (re-established in 1850).
1791—Union of the University of the State of Pennsylvania with The College, under the title of the UNIVERSITY OF PENNSYLVANIA.
1874—University Hospital established.
1875—Towne Scientific School founded.
1877—Department of Music established.
1878—School of Dentistry founded.
1881—Wharton School of Finance and Commerce founded.
1882—Graduate School founded.
1884—Veterinary School founded.
1885—Veterinary Hospital established.
1885—Department of Physical Education established.
1889—Department of Archaeology established.
1892—Laboratory of Hygiene established.
1892—Wistar Institute of Anatomy and Biology established.
1892—Saturday Courses for Teachers established.
1896—Houston Club organized.
1896—Flower Astronomical Observatory opened.
1904—Summer School (College) established.
1906—College Courses for Teachers established.
1910—Henry Phipps Institute transferred to the University.

ADMINISTRATIVE OFFICERS.

OF THE CORPORATION.

Provost—EDGAR F. SMITH, PH. D., SC. D., LL. D.

Office in the John Harrison Laboratory of Chemistry, Thirty-fourth and Spruce Streets.

Vice-Provost—JOSIAH H. PENNIMAN, PH. D., LL. D.

Office in College Hall.

Secretary—EDWARD ROBINS.

Office, 114 College Hall. Office hours, 9.30 A. M. to 4.30 P. M.

Saturdays, 9.30 A. M. to 1 P. M.

Treasurer—WILLIAM H. HUTT, JR.

General Offices, 400 Chestnut Street.

Bursar—WILLIAM O. MILLER, A. B.

Office, 102 College Hall. Office hours, 9 A. M. to 5 P. M., daily.

The Bursar's office is open from 8.45 A. M. to 5 P. M. Saturdays, 8.45 A. M. to 1 P. M.

OF THE COLLEGE AND PROFESSIONAL FACULTIES.

Dean of the College Faculty—GEORGE EGBERT FISHER, PH. D.

Office, 103 College Hall, Woodland Avenue. Office hours, 9 A. M. to 12 M., daily.

Dean of the Graduate School Faculty—HERMAN V. AMES, PH. D.

Office, 105 College Hall, Woodland Avenue. Office hours, 9 A. M. to 12 M., daily.

Dean of the Law Faculty—WM. DRAPER LEWIS, LL. B., PH. D.

Office in the Law School Building, Thirty-fourth and Chestnut Streets. Office hours, 11.15 A. M. to 12.15 P. M., daily, except on Wednesdays and Thursdays, 12.15 to 1 P. M.

Dean of the Medical Faculty—ALLEN J. SMITH, A. M., M. D., SC. D.

The Dean's Office (in the Medical Laboratories, Hamilton Walk) is open from 9 A. M. to 5 P. M.; Saturdays, 9 A. M. to 1 P. M.

Dean of the Dental Faculty—EDWARD C. KIRK, D. D. S., Sc. D.
Office, Dental Hall, Thirty-fourth and Locust Streets. Office
hours, 9 A. M. to 1 P. M., daily.

Dean of the Faculty of Veterinary Medicine—LOUIS A. KLEIN,
V. M. D.

Office, Veterinary Building, Thirty-ninth Street and Woodland
Avenue. Office hours, 1 to 2 P. M., daily.

OF THE DEPARTMENT OF PHYSICAL EDUCATION.

Director—R. TAIT MCKENZIE, A. B., M. D.

Office in the Gymnasium, Thirty-third and Spruce Streets.
Office hours, 3 P. M. to 6 P. M., daily, except Saturdays.

Physician—RUFUS B. SCARLETT, M. D., 4005 Chestnut Street.

Office hours daily, from 8 to 9 A. M., 12 to 1 P. M., and from
7 to 8 P. M. Sundays until 10 A. M. Telephone connection.
Other hours by appointment.

Ophthalmologist—WILLIAM CAMPBELL POSEY, A. B., M. D., 2049
Chestnut Street.

Office hours, from 8.30 A. M. to 1 P. M., daily. Telephone con-
nection.

OF OTHER DEPARTMENTS.

Librarian of the University—MORRIS JASTROW, JR., PH. D.

Office in the Library, Thirty-fourth Street below Walnut. Office
hours, 10 A. M. to 1 P. M.

Assistant Librarian—KATHARINE STOCKTON LEIPER.

Office in the Library. Office hours, 2 P. M. to 5 P. M.

The Library is open daily during term-time, except Sundays
and holidays, from 8.30 A. M. to 10 P. M. During the summer
vacation, from 9 A. M. to 5 P. M.; during the session of the
Summer School, from 8.30 A. M. to 5 P. M.

Librarian of the Biddle Law Library—MRS. MARGARET C. KLINGEL-
SMITH, LL. B.

Office in the Law School Building, Thirty-fourth and Chestnut
Streets. Office hours, 10 A. M. to 5 P. M., daily.

Manager of the Bureau of Publicity—GEORGE E. NITZSCHE, LL. B.
Office in Houston Hall (third floor), Spruce Street above
Thirty-fourth. Office hours, 9 A. M. to 5 P. M., daily.

Superintendent of the University Hospital—MARION E. SMITH.
The Hospital is on Spruce Street above Thirty-fourth. Communications concerning the business of the Hospital and the admission of patients should be addressed to the Superintendent.

Director of the William Pepper Clinical Laboratory—ALFRED STENGEL, M. D., Sc. D.
Office in the Laboratory. Office hours, 2 P. M. to 3 P. M., daily.
The Laboratory is on Spruce Street below Thirty-sixth, adjoining the Hospital.

Director of the Wistar Institute—MILTON J. GREENMAN, PH. B., M. D.
Office in the Institute, Thirty-sixth Street and Woodland Avenue. Office hours, from 9 A. M. to 12 M., daily, except Saturdays.

Director of the John Harrison Laboratory of Chemistry—EDGAR. F. SMITH, PH. D., Sc. D., LL. D.
Office in the Laboratory, Thirty-fourth and Spruce Streets.

Director of the Laboratory of Hygiene—ALEXANDER C. ABBOTT, M. D., Sc. D.
Office in the Laboratory, Thirty-fourth Street below Walnut.

Director of the Randal Morgan Laboratory of Physics—ARTHUR W. GOODSPEED, PH. D.
Office in the Laboratory, Thirty-fourth Street below Walnut.

Director of the Psychological Laboratory—LIGHTNER WITMER, PH. D.
Office in the Laboratory, College Hall.

Director of the Light and Heat Station—SAMUEL B. LOCKE.
Office in the Central Light and Heat Station, Thirty-fourth and Spruce Streets.

Director of the Botanic Garden—JOHN M. MACFARLANE, D. SC.
The Botanic Garden is adjacent to Biological Hall, on Hamilton Walk, and is open daily from 7 A. M. to sunset. The greenhouses are open from 8 A. M. to 5 P. M.

Director of the Flower Astronomical Observatory—CHARLES L. DOOLITTLE, C. E., SC. D.

The Observatory is situated on the West Chester Pike, one and three-fourths miles beyond the city limits. (Take elevated cars on Market Street to Sixty-ninth Street, then change to Ardmore or West Chester car.) The residence of the Director is adjacent to the Observatory.

Director of the Wharton School of Finance and Commerce—JAMES T. YOUNG, PH. D.

Office, Logan Hall, Thirty-sixth Street below Woodland Avenue. Office hours, 11 A. M. to 1 P. M., daily.

Director of the Summer School—ALBERT DUNCAN YOCUM, PH. D.
Office hours, 1 P. M. to 3 P. M., daily, except Saturday.

Director of Courses in Tropical Medicine—ALLEN J. SMITH, M. D., SC. D.

Dean's Office, Medical Laboratory Building, Thirty-sixth and Hamilton Walk.

Purchasing Agent—BOULTON EARNSHAW.

Office, College Hall. Office hours, 9 A. M. to 4.30 P. M.

HENRY PHIPPS INSTITUTE.

Director of the Laboratory—PAUL A. LEWIS, M. D.

Director of Clinical Department—H. R. M. LANDIS, M. D.

Director of Sociological Department and Superintendent—ALEXANDER M. WILSON, A. B.

UNIVERSITY MUSEUM.

The Museum contains the archaeological and ethnological collections of the University, and is situated on Spruce Street below Thirty-fourth, opposite Franklin Field. The collections are open to visitors daily, during the scholastic year, New Year's Day, Good Friday and Christmas Day excepted, from 10 A. M. to 5 P. M.; on Sundays, from 2 P. M. to 5 P. M.

GENERAL SUMMARIES.

OFFICERS OF INSTRUCTION.

The College	259	
Graduate School	99	
Law School	32	
School of Medicine	155	
" " Dentistry	55	
" " Veterinary Medicine	25	
Emeritus Professors	5	
	<hr/>	630
Duplications		131
		<hr/>
Total		499

STUDENTS.

The College	3730	
Graduate School	416	
Law School	347	
School of Medicine.....	463	
" " Dentistry	462	
" " Veterinary Medicine	154	
	<hr/>	5,572
Duplications		180
		<hr/>
Total		5,392

GEOGRAPHICAL SUMMARY OF STUDENTS.

Alabama	15	Bermuda	1	Colorado	10
Arizona	2	Brit. West Indies...	3	Connecticut	41
Arkansas	2	California	20	Cuba	11
Australia	18	Canada	22	Delaware	63
Austria	1	Central America ..	11	Denmark	6
Bahamas	2	China	24	Dist. of Columbia..	31

England	4	Minnesota	19	Scotland	3
Egypt	4	Mississippi	2	South America	45
Florida	10	Missouri	19	South Carolina	16
France	9	Montana	2	South Dakota	2
Georgia	17	Nebraska	8	Spain	2
Germany	8	Nevada	1	Sweden	3
Holland	3	New Hampshire	18	Switzerland	1
Idaho	3	New Jersey	477	Tennessee	10
Illinois	14	New Mexico	2	Texas	12
India	1	New York	283	Turkey	1
Indiana	36	New Zealand	8	Turkey in Asia	2
Iowa	22	North Carolina	29	Utah	6
Ireland	4	North Dakota	1	Vermont	8
Italy	8	Ohio	63	Virginia	28
Japan	7	Oregon	7	Washington	19
Kansas	8	Panama	6	West Virginia	15
Kentucky	15	Pennsylvania, out-		Wisconsin	17
Korea	1	side of Phila...	1497	Wyoming	1
Louisiana	6	Philadelphia	2240		
Maine	21	Philippine Islands..	2	Total	5,572
Maryland	96	Porto Rico	23	Duplications	180
Massachusetts	57	Rhode Island	10		
Mexico	11	Russia	5	Total	5,392
Michigan	10	Santo Domingo ...	1		

SCHOOL OF MEDICINE.*

On September 29, 1911, the 146th annual session of the School of Medicine will be opened, to continue until June 19, 1912, when the annual commencement exercises for the term will be held.

This venerable institution, the oldest Medical School in the United States, was founded in 1765 by Dr. JOHN MORGAN, who filled in it the first medical professorship created in America. In his opening "Discourse upon the Institution of Medical Schools in America," delivered in the College of Philadelphia, May 30, 1765, Dr. MORGAN uttered these prophetic words: "Perhaps this medical institution, the first of its kind in America, though small in its beginning, may receive a constant increase of strength, and annually exert new vigor. It may collect a number of young persons, of more than ordinary abilities, and so improve their knowledge as to spread its reputation to distant parts. By sending these abroad duly qualified, or by exciting an emulation amongst men of parts and literature, it may give birth to other useful institutions of a similar nature, or occasional rise, by its example, to numerous societies of different kinds, calculated to spread the light of knowledge through the whole American continent, wherever inhabited."

Through Dr. MORGAN, the pupil of HUNTER in London and of CULLEN in Edinburgh, the graduates of this school take a just pride in regarding it as the lineal descendant of the best medical schools of Great Britain in the last century. To Dr. MORGAN was soon joined another pupil of CULLEN, Dr. WILLIAM SHIPPEN, as Professor of Anatomy and Surgery, thus forming another tie of relationship to the celebrated University of Edinburgh, whose methods of instruction were substantially adopted here. In the next year Dr. ADAM KUHN was added as Professor of Botany and Materia Medica; and on June 21, 1768, a Commencement was held, at which medical honors were bestowed, the first in point of time in America. In 1769, Dr. BENJAMIN RUSH was elected to the Professorship of Chemistry, while Dr. THOMAS BOND, one of the trustees of the College of Philadelphia, delivered lectures on Clinical Medicine in the Pennsylvania Hospital.

To the faculty thus composed of MORGAN, SHIPPEN, KUHN and RUSH have succeeded, at various times, professors whose reputations have been national, as BARTON, WISTAR, CHAPMAN, PHYSICK, DEWEES, HORNER, HARE, GIBSON, JACKSON, GEORGE B. WOOD, HODGE, JAMES B. ROGERS, CARSON, PEPPER, FRANCIS GURNEY SMITH, NEILL, HENRY H. SMITH, LEIDY, AGNEW, GOODELL, the younger PEPPER, STILLÉ, R. A. F. PENROSE, H. C. WOOD, ASHHURST, NORRIS, TYSON and DUHRING.

The number of graduates in the School of Medicine is 13,445.

* The authorities of the school reserve the right to make such modifications in connection with the announcements embodied in this catalogue as may from time to time be required or deemed wise without the formality of further notice.

PART I.

TEACHING STAFF.

SCHOOL OF MEDICINE.

FACULTY.

EDGAR F. SMITH, PH. D., Sc. D., LL. D., PROVOST.

JOSIAH H. PENNIMAN, PH. D., LL. D., VICE-PROVOST.

HORATIO C. WOOD, M. D., LL. D., Emeritus Professor of
Materia Medica, Pharmacy and General Therapeutics.

JAMES TYSON, M. D., LL. D., Emeritus Professor of Medicine.

LOUIS A. DUHRING, M. D., Emeritus Professor of Dermatology.

PROFESSORS.

EDWARD T. REICHERT, M. D., Professor of Physiology.

BARTON COOKE HIRST, M. D., Professor of Obstetrics.

GEORGE A. PIERSOL, M. D., Sc. D., Professor of Anatomy.

JOHN MARSHALL, M. D., NAT. Sc. D., LL. D., Professor of
Chemistry and Toxicology.

ALEXANDER C. ABBOTT, M. D., Sc. D., PEPPER Professor of
Hygiene and Bacteriology.

JOHN G. CLARK, M. D., Professor of Gynecology.

GEORGE E. DE SCHWEINITZ, M. D., Professor of Ophthalmology.

CHARLES H. FRAZIER, M. D., Professor of Clinical Surgery.

JOHN H. MUSSER, M. D., LL. D., Professor of Clinical Medicine.

ALFRED STENGEL, M. D., Sc. D., Professor of Clinical Medicine.

CHARLES K. MILLS, M. D., Professor of Neurology.

WILLIAM G. SPILLER, M. D., Professor of Neuro-pathology.

CHARLES W. BURR, M. D., Professor of Mental Diseases.

R. TAIT MCKENZIE, M. D., Professor of Physical Education.

RICHARD MILLS PEARCE, M. D., Professor of Pathology and
of Research Medicine.

DAVID L. EDSALL, M. D., Professor of Medicine.

ALONZO ENGELBERT TAYLOR, M. D., BENJAMIN RUSH Pro-
fessor of Physiological Chemistry.

ALFRED N. RICHARDS, PH. D., Professor of Pharmacology.

ALLEN J. SMITH, A. M., M. D., Sc. D., Professor of Comparative Pathology; in charge of the courses in Tropical Medicine; and Dean of the Faculty.

EDWARD MARTIN, M. D., JOHN RHEA BARTON Professor of Surgery.

GWILYM G. DAVIS, M. D., M. R. C. S. (Eng.), Professor of Orthopedic Surgery.

JOHN B. DEEVER, M. D., LL. D., Professor of Clinical Surgery.

MILTON B. HARTZELL, A. M., M. D., Professor of Dermatology.

HENRY K. PANCOAST, M. D., Professor of Roentgenology.

ON THE GEORGE B. WOOD FOUNDATION.

DANIEL J. MCCARTHY, M. D., Professor of Medical Jurisprudence.

————— Professor of Botany.

CLINICAL PROFESSORS.

B. ALEXANDER RANDALL, M. D., PH. D., Clinical Professor of Otology.

J. P. CROZER GRIFFITH, M. D., Clinical Professor of Pediatrics.

THOMAS R. NEILSON, M. D., Clinical Professor of Genito-Urinary Diseases.

CHARLES P. GRAYSON, M. D., Clinical Professor of Laryngology and Rhinology.

ASSOCIATE PROFESSORS.

WILLIAM G. SPILLER, M. D., Associate Professor of Neurology.

JAMES K. YOUNG, M. D., Associate Professor of Orthopedic Surgery.

T. TURNER THOMAS, M. D., Associate Professor of Applied Anatomy.

ADJUNCT PROFESSORS.

RICHARD H. HARTE, M. D., Adjunct Professor of Surgery.

JAMES P. HUTCHINSON, M. D., Adjunct Professor of Surgery.

ASSISTANT PROFESSORS.

M. HOWARD FUSSELL, M. D., Assistant Professor of Medicine.

ALFRED C. WOOD, M. D., Assistant Professor of Surgery.

RICHARD C. NORRIS, M. D., Assistant Professor of Obstetrics.
DAVID H. BERGEY, M. D., Assistant Professor of Bacteriology.
*ALOYSIUS O. J. KELLY, M. D., Assistant Professor of Medicine.
WILLIAM PEPPER, M. D., Assistant Professor of Clinical Pathology.
DAVID RIESMAN, M. D., Assistant Professor of Medicine.
JOSEPH SAILER, M. D., Assistant Professor of Medicine.
J. EDWIN SWEET, M. D., Assistant Professor of Experimental Surgery.
WARFIELD T. LONGCOPE, M. D., Assistant Professor of Applied Medicine.
PAUL A. LEWIS, M. D., Assistant Professor of Pathology.

DEMONSTRATORS.

DANIEL W. FETTEROLF, M. D., Demonstrator of Chemistry.
EDWARD LODHOLZ, M. D., Demonstrator of Physiology.
GEORGE FETTEROLF, M. D., Demonstrator of Anatomy.
WALTER S. CORNELL, M. D., Demonstrator of Osteology.
WILLIAM H. F. ADDISON, M. B., Demonstrator of Histology.
HOWARD T. KARSNER, M. D., Demonstrator of Pathology.
WILSON G. WOOD, M. D., Demonstrator of Pharmacology.
DAMASO RIVAS, M. D., PH. D., Assistant Director of Laboratory of Comparative Pathology and Tropical Medicine.

ASSOCIATES.

HENRY D. BEYEA, M. D., Associate in Gynecology.
THOMPSON S. WESTCOTT, M. D., Associate in Pediatrics.
HERMAN B. ALLYN, M. D., Associate in Medicine.
NATHANIEL GILDERSLEEVE, M. D., Associate in Bacteriology.
JOHN H. GIRVIN, M. D., Associate in Obstetrics.
WILLIAM R. NICHOLSON, M. D., Associate in Obstetrics.
JAMES W. McCONNELL, M. D., Associate in Neurology.
GEORGE W. NORRIS, M. D., Associate in Medicine.
BROOKE M. ANSPACH, M. D., Associate in Gynecology.
JOHN B. CARNETT, M. D., Associate in Surgery.
GEORGE P. MÜLLER, M. D., Associate in Surgery.

JOHN H. JOPSON, M. D., Associate in Surgery.
 T. TURNER THOMAS, M. D., Associate in Surgery.
 JOHN C. HIRST, M. D., Associate in Obstetrics.
 MAURICE OSTHEIMER, Associate in Pediatrics.
 A. B. EISENBREY, M. D., Associate in Research Medicine.

LECTURERS.

ARTHUR A. STEVENS, M. D., Lecturer on Medicine.
 B. FRANKLIN STAHL, M. D., Lecturer on Dietetics of the Sick.
 JOHN T. CARPENTER, M. D., Lecturer on Ophthalmology.
 ALFRED R. ALLEN, M. D., Lecturer on Neurological Electro-
 therapeutics.
 ——— ——— ——— Lecturer on the History of Medicine.

INSTRUCTORS AND ASSISTANT DEMONSTRATORS.

GEORGE H. CHAMBERS, M. D., Assistant Demonstrator of
 Histology.
 J. REX HOBENSACK, M. D., Assistant Demonstrator of Anatomy.
 LEON A. RYAN, PH. D., Assistant Demonstrator of Chemistry.
 JOHN J. ROBRECHT, M. D., Assistant Demonstrator of Anatomy.
 RICHARD F. GERLACH, M. D., Assistant Demonstrator of
 Anatomy.
 JOHN M. CRUICE, M. D., Instructor in Medicine.
 ALBERT P. FRANCINE, M. D., Instructor in Medicine.
 WILLIAM E. QUICKSALL, M. D., Assistant Demonstrator of
 Anatomy.
 HOWARD A. SUTTON, M. D., Assistant Demonstrator of
 Anatomy.
 CHARLES C. NORRIS, M. D., Instructor in Gynecology.
 DANIEL M. HOYT, Instructor in Pharmacology.
 EDWARD A. SHUMWAY, M. D., Instructor in Ophthalmology.
 WALTER S. CORNELL, M. D., Assistant Demonstrator of
 Anatomy.
 E. HOLLINGSWORTH SITER, M. D., Instructor in Genito-
 Urinary Diseases.
 H. MAXWELL LANGDON, M. D., Instructor in Ophthalmology.
 THOMAS B. HOLLOWAY, M. D., Instructor in Ophthalmology.
 CLIFFORD B. FARR, M. D., Instructor in Medicine.

- CHARLES A. FIFE, M. D., Instructor in Pediatrics.
HOWARD C. CARPENTER, M. D., Instructor in Pediatrics.
*RALPH S. LAVENSON, M. D., Instructor in Medicine.
WALTER G. ELMER, M. D., Instructor in Orthopedic Surgery.
WARREN C. GOODWIN, M. D., Assistant Demonstrator of Anatomy.
WILLIAM B. SMALL, M. D., Instructor in Gynecology.
PENN-GASKELL SKILLERN, JR., M. D., Assistant Demonstrator of Anatomy.
RALPH BUTLER, M. D., Instructor in Otology.
ALFRED R. ALLEN, M. D., Instructor in Neurology and Neuropathology.
S. D. LUDLUM, M. D., Instructor in Neurology and in Neuropathology.
NATE GINSBURG, M. D., Assistant Demonstrator of Anatomy.
FLOYD E. KEENE, M. D., Instructor in Gynecology.
THOMAS A. O'HARA, M. D., Instructor in Orthopedic Surgery.
CARL WILLIAMS, M. D., Instructor in Ophthalmology.
WALTER S. HARGETT, M. D., Instructor in Laryngology.
J. CLAXTON GITTINGS, M. D., Instructor in Pediatrics.
FRED H. KLAER, M. D., Instructor in Medicine.
THOMAS A. COPE, M. D., Instructor in Medicine.
ROBERT L. GRAY, M. D., Instructor in Orthopedic Surgery.
BORDEN S. VEEDER, M. D., Assistant Demonstrator of Pathology.
FRED DEFOREST WEIDMAN, M. D., Assistant Demonstrator of Pathology.
JOHN SPEESE, M. D., Instructor in Surgery.
B. A. THOMAS, M. D., Instructor in Surgery.
P. S. STOUT, M. D., Instructor in Laryngology.
GEORGE M. PIERSOL, M. D., Instructor in Medicine.
EDWARD H. GOODMAN, M. D., Instructor in Medicine.
ROBERT G. TORREY, M. D., Instructor in Medicine.
FRANK A. CRAIG, M. D., Instructor in Medicine.
C. M. MONTGOMERY, M. D., Instructor in Medicine.
J. T. ULLOM, M. D., Instructor in Medicine.
J. HAROLD AUSTIN, M. D., Assistant Demonstrator of Pathology.
A. B. EISENBREY, M. D., Assistant Demonstrator of Pathology.
W. R. WATSON, M. D., Assistant Demonstrator of Normal Histology.
GEORGE G. ROSS, M. D., Instructor in Surgery.
ALBERT D. WHITING, M. D., Instructor in Surgery.

* On leave of absence.

DAMON B. PFEIFFER, M. D., Instructor in Surgery.
E. P. BARNARD, M. D., Assistant Demonstrator of Obstetrics.
FRANK C. KNOWLES, M. D., Instructor in Dermatology.

ASSISTANT INSTRUCTORS.

GEORGE D. MORTON, M. D., Assistant Instructor in Surgery.
JOHN W. BUSCH, M. D., Assistant Instructor in Surgery.
ALEXANDER A. UHLE, M. D., Assistant Instructor in Genito-Urinary Diseases.
J. H. ALLEN, M. D., Assistant Instructor in Obstetrics.
L. F. LUBURG, M. D., Assistant Instructor in Obstetrics.
HOWARD KENNEDY HILL, M. D., Assistant Instructor in Medicine.
CHARLES F. MITCHELL, M. D., Assistant Instructor in Surgery.
ELDRIDGE L. ELIASON, M. D., Assistant Instructor in Surgery.
BENJAMIN D. PARISH, M. D., Assistant Instructor in Otology.
KARL SCHÄFFLE, M. D., Assistant Instructor in Surgery.
GEORGE M. LAWS, M. D., Assistant Instructor in Surgery.
THOMAS C. KELLY, M. D., Assistant Instructor in Medicine.
SAMUEL LEOPOLD, M. D., Assistant Instructor in Neurology.
N. S. YAWGER, M. D., Assistant Instructor in Neurology.
WILLIAMS B. CADWALADER, M. D., Assistant Instructor in Neurology.
W. G. TURNBULL, M. D., Assistant Instructor in Medicine.
D. N. HUSIK, M. D., Assistant Instructor in Laryngology.
GORDON J. SAXON, M. D., Assistant Instructor in Physical Diagnosis.
SAMUEL BRADBURY, 3RD, M. D., Assistant Instructor in Physical Diagnosis.
W. H. MACKINNEY, M. D., Assistant Instructor in Genito-Urinary Surgery.
JOHN LAIRD, M. D., Assistant Instructor in Genito-Urinary Surgery.

PROSECTORS.

ASTLEY P. C. ASHHURST, M. D., Prosector to the Associate Professor of Applied Anatomy.
ISAAC WELSH BROWN, M. D., Prosector in the Chair of Anatomy.

ASSISTANTS.

REUBEN A. BOGIA, M. D., Assistant in Physiology.

* J. GARRETT HICKEY, D. D. S., Assistant in Physiology.

CHARLES C. NORRIS, M. D., Assistant in Gynecological Pathology.

RALPH BUTLER, M. D., Assistant in Otological Pathology.

SAMUEL LEOPOLD, M. D., Assistant in Neuro-pathology.

HARRY A. SCHATZ, M. D., Second Assistant in Bacteriology.

SYLVESTER J. DEEHAN, M. D., Third Assistant in Bacteriology.

DAVID M. P. MAGEE, M. D., Assistant in Physiology.

FRANK B. BAIRD, M. D., Assistant in Physiology.

FREDERICK O. WAAGE, M. D., Assistant in Physiology.

JAMES GARRETT McCOLLIN, M. D., Assistant in Physiology.

W. B. CADWALADER, M. D., Assistant in Neuropathology.

E. M. WILLIAMS, M. D., Assistant in Neuropathology.

FRANCIS S. CHAMBERS, M. D., Assistant in Anatomy.

S. BYRON GOLDSMITH, M. D., Assistant in Anatomy.

ELIZABETH BARLETT, *Secretary.*

* On leave of absence.

PART II.

ADMISSION REQUIREMENTS.

ADMISSION REQUIREMENTS.

ANNOUNCEMENT.

Several years ago it was announced that beginning with 1908 certain advances would be made in the entrance requirements of the School of Medicine, such increases to be added gradually, until in 1910 the full new requirements would prevail.

Prior to 1908 the requirements for admission were equivalent to those prescribed for admission to the Freshman Class of the College. In 1908 the candidates for entrance to the First Year Class were required to show, in addition, evidence of having had special science preparation (one year of work, with laboratory exercises, in Physics, General Biology or Zoology and in Inorganic Chemistry, including Qualitative Analysis), and a specified amount of work in two languages other than English (one of which must have been German or French).

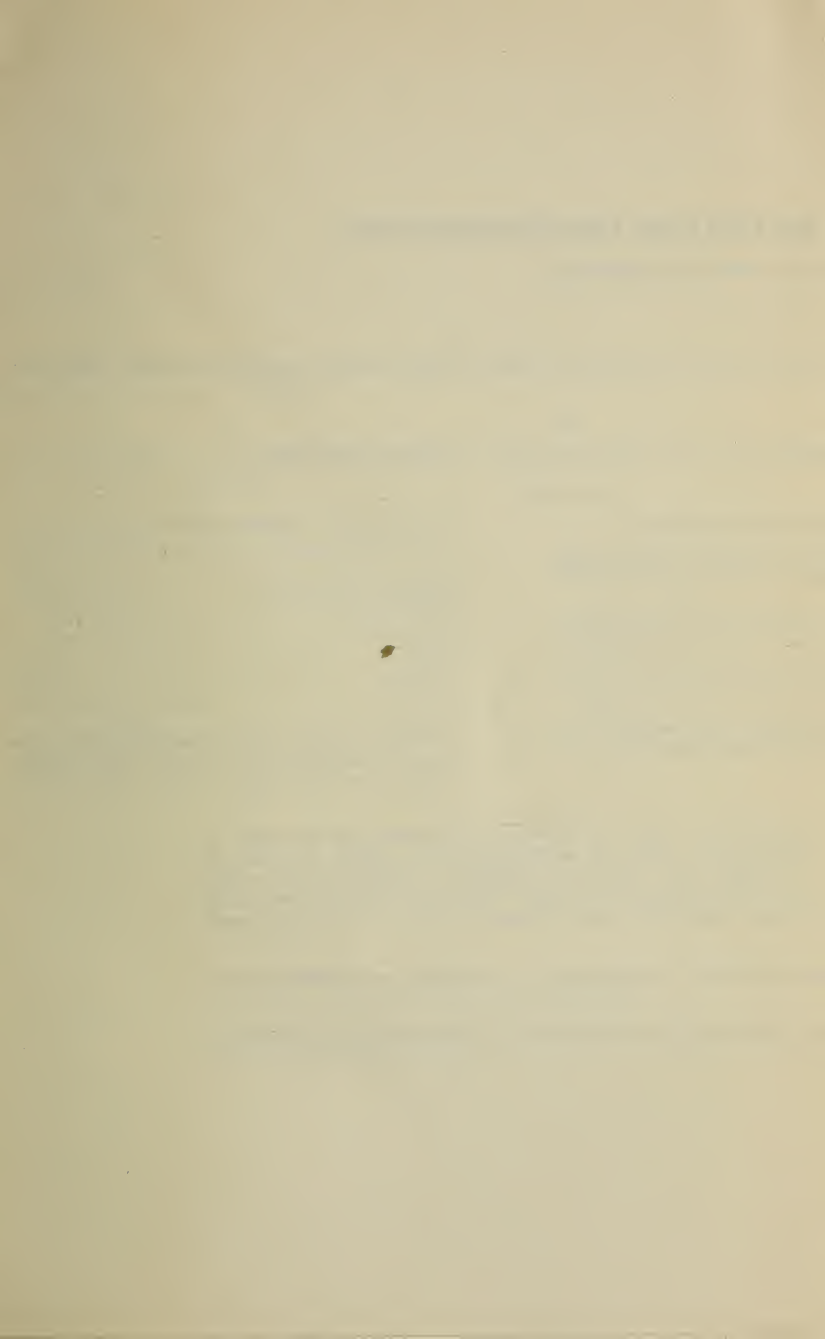
In 1909 the same special requirements prevailed; but one year of work in a reputable college or its equivalent was added to the general educational demands.

In 1910 two years of work in a reputable college, or the equivalent, were required in addition to the same special language and science requirements.

FOR THE ACADEMIC YEAR 1911-12.—Candidates for admission to the School of Medicine must have successfully completed in a college or university recognized by this University work equivalent to that prescribed for the Freshman and Sophomore Classes in this University, which must include courses in Physics, Chemistry and General Biology or Zoology, together with appropriate laboratory work in these subjects. For detailed information consult pages 34 and 35.

Certificates from recognized colleges covering these requirements will be accepted in lieu of an examination.

I. Admission by Diploma or Certificate.—All diplomas and certificates should be transmitted to the Dean of the Medical Faculty as early as possible in June, for decision in early summer; should this, for good reasons, be impossible, then not later than September 1st. Candidates will appreciate the importance of sending in their credentials at as early a date as possible when they understand that, until these have been acted upon and the decision announced, they will not know in what subjects they will be



EPITOMIZED STATEMENT OF ENTRANCE REQUIREMENTS.

(For details the fuller descriptions should be consulted.)

This table is based upon the entrance requirements and the work of the Freshman and Sophomore Years of The College of this University. Subjects printed in italics are essential.

I.

A. COLLEGE ENTRANCE REQUIREMENTS.

(16-23 units.)

<i>English</i>	4	units.
<i>History</i>	2	"
<i>Mathematics:</i>		
<i>Algebra</i>	2	"
<i>Plane Geometry</i>	2	"
* <i>Latin</i>	7	"
* <i>Greek</i>	6	"
* <i>Elementary German</i>	3	"
or		
* <i>Elementary French</i>	3	"

II.

FRESHMAN AND SOPHOMORE COLLEGE WORK.‡

(30 units.)

B. SPECIAL SCIENTIFIC REQUIREMENTS.

<i>Mathematics (Elementary Plane Trigonometry)</i>	1	unit.
* <i>Intermediate German (Course 322)</i>	3	"
or		
* <i>Intermediate French (Course 282)</i>	3	"
† <i>Biology (including Laboratory work) (Course 681)</i>	3	"
† <i>Physics (including Laboratory work) (Course 601)</i>	3	"
† <i>General and Inorganic Chemistry (including Laboratory work) (Courses 91 and 92)</i>	5	"

C. ELECTIVE SUBJECTS FOR COMPLETION OF REQUIRED TOTAL OF UNITS.

<i>English (advanced)</i>	
<i>Mathematics</i> "	
<i>Greek</i> "	
<i>Latin</i> "	
<i>French</i> "	
or	
<i>German</i> "	
(Other foreign modern scientific languages may be credited as in the Arts and Science division of the College of this University.)	

*Two languages other than English must be offered; one of these two must be French or German; the two may be French and German or either Latin or Greek with French or German. In case of applicants whose native language is other than English, this will be accepted on the same basis as is English for American applicants. English will in such cases be permitted as a substitute for French or German as a modern scientific language. However, no student will be admitted who is unable to understand, read, write and speak English sufficiently well to enable him to carry on the work of the class.

†Laboratory note-books or a complete and official statement of the experiments or exercises performed by the candidates must accompany all certificates.

‡These subjects must be understood as of a grade at least equal to that prescribed in the Freshman and Sophomore Years in reputable colleges.

required to take examination. Diploma or certificate must be accompanied by an official statement of the exact amount of Physics, Chemistry and either General Biology or Zoölogy studied and the laboratory note-books of the candidate in these subjects.

All credentials are acted upon by the Faculty of the College Department of this University, or appropriate committee of the same.

(Blanks for this purpose may be obtained upon application to the Dean.)

II. Admission by Examination.—Candidates who have successfully completed the full course in a recognized high school, but who lack in whole or part the prerequisite collegiate credits (representing the work of the Freshman and Sophomore Classes as specified above) and desire on the basis of knowledge acquired outside of collegiate instruction to try to secure such prerequisite collegiate credits by examination, are permitted to apply for such examinations for credits in the subjects in which they are deficient to the Collegiate Department of this University. Upon successfully passing the examinations set by the collegiate departments concerned in the subjects in which the candidates are deficient, they will be admitted to regular standing in the School of Medicine. Examinations for admission to the first-year class in 1911 will be held in College Hall, beginning respectively on Thursday, June 22, at 9 A. M., and Thursday, September 21, at 9 A. M. Candidates may elect between these two dates.

Candidates will be required to register in College Hall between 9 and 11 A. M., either on Thursday, June 22, or on Thursday, September 21, and to undergo the examinations beginning on the same day.

UNIT* VALUES OF SUBJECTS REQUIRED FOR ADMISSION, SESSION 1911-1912.

For unconditional admission to the first-year class in the fall of 1911, each candidate must show evidence by acceptable credentials or by examination of having satisfactorily completed the work required for admission to the collegiate department of this University and re-

* A unit of college grade is the equivalent of one hour of lecture or recitation each week for the full academic year, or two hours of laboratory work each week for the same period. Units of preparatory work usually vary between three and five hours each week, as compared with one hour of collegiate study for a single unit.

quired of the Freshman and Sophomore classes in the College. Expressed in unit values, this contemplates 53 units; of which it may be presumed 23 represent the entrance requirements of the College, and 30 the work of the first two years of the collegiate course. These 53 units are made up from the following four groups, Groups I and II being the entrance requirements of the College of this University, Group III representing special collegiate scientific preparation required for Medical study, and Group IV including a number of subjects suggested from the Freshman and Sophomore courses, from which may be offered the necessary additional units.

I. Each candidate must offer English A, B, two branches of History and Mathematics A, C, amounting in all to 10 units.

English:

A—Reading and Practice	2 units
B—Study and Practice	2 “

(No student will be admitted to the School of Medicine unless possessed of such ability to understand, read, write and speak the English language as to enable him to carry on the work of the course.)

History: Any two of the following:

A—Ancient History	1 unit
B—Medieval and Modern History	1 “
C—English History	1 “
D—American History and Civil Government	1 “

Mathematics:

A—Elementary Algebra	2 units
C—Plane Geometry	2 “
F—Plane Trigonometry	1 unit

II. Each candidate must offer two of the four languages (aggregating from 6 to 10 units) contained in this group (one of these must be either German or French).

Latin:

B—Cæsar, Gallic War, Bks. I-IV	1 unit
C—Cicero, Six Orations	2 units
D—Vergil, Aeneid, Bks. I-VI	2 “
L—Prose Composition	1 unit
M—Sight Translation of Prose	1 “

Greek:

B—Xenophon, Anabasis, Bks. I-IV	2 units
C—Homer, Iliad, Bks. I-III	2 “
F—Prose Composition	1 unit
G—Sight Translation of Prose	1 “

French:

A—Elementary French 3 units

German:

A—Elementary German 3 units

III.—The following special subjects (representing a minimum total of 11 units) must also be offered for admission to the School of Medicine. They must include laboratory work; and evidence of such exercise in the shape of the candidate's laboratory note-books must be presented, accompanied by the usual teachers' certificates as to the trustworthiness of the record.

General and Inorganic Chemistry—including Qualitative Analysis (Courses 91 and 92 of the College Department) 5 units
 Physics (Course 601 of the College Department) 3 "
 General Biology or Zoölogy (Course 681 of College Department) 3 "

IV.—In addition to the foregoing the candidate must offer at least a sufficient number of units of work done in a college recognized by this University (or present evidence of the equivalent of such work), to insure a minimum total of 53 units. In this additional requirement a reasonable amount of latitude in the distribution of units will be allowed, following the unit values of similar studies in the Course in Arts and Sciences of this University. As examples of the various courses from which the candidate may attain the necessary additional units the following courses of the College, Arts and Science, of this University may be presented with their unit values:

English:

Courses 231, 232, 233, 234, 235, 236 6 units

History:

Courses 362, 363, 364, 365 8 "

Mathematics:

Courses 461, 462 2 "

Greek:

Course 331 3 "

Latin:

Courses 431 A, 431 B, 431 C, 432 A, 432 B, 432 C..... 9 "

French:

Course 282 3 "

German:

Course 322 3 "

Botany:

Courses 71, 72, 77..... 10 units

Chemistry:

Course 94 or 95, and 96 6-7 “

(Credit may be given for knowledge of foreign languages not included in the above list.)

DESCRIPTION OF SUBJECTS REQUIRED FOR ADMISSION.

I.

ENGLISH.

No candidate will be accepted in English whose work is notably defective in spelling, punctuation, idiom or division into paragraphs.

A. (1) GRAMMAR and ANALYSIS, as in any advanced course in English Grammar, Analysis and Composition. (2) The writing of several paragraphs, correct in spelling, punctuation, grammar and expression, written on subjects taken from the following works, a general knowledge of which is required.

The form of examination will be the writing of a paragraph or two on each of several topics chosen by the candidate from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books.

For 1911:

Group I (two to be selected).

Shakespeare's *As You Like It*, *Henry V.*, *Julius Cæsar*, *The Merchant of Venice*, *Twelfth Night*.

Group II (one to be selected).

Bacon's *Essays*; Bunyan's *The Pilgrim's Progress*, Part I; *The Sir Roger de Coverly Papers* in *The Spectator*; Franklin's *Autobiography*.

Group III (one to be selected).

Chaucer's *Prologue*; Spenser's *Faerie Queene* (selections); Pope's *The Rape of the Lock*; Goldsmith's *The Deserted Village*; Palgrave's *Golden Treasury* (*First Series*), *Books II and III*, with especial attention to Dryden, Collins, Gray, Cowper and Burns.

Group IV (two to be selected).

Goldsmith's *The Vicar of Wakefield*; Scott's *Ivanhoe*; Scott's *Quentin Durward*; Hawthorne's *The House of the Seven Gables*;

Thackeray's *Henry Esmond*; Mrs. Gaskell's *Cranford*; Dickens' *A Tale of Two Cities*; George Eliot's *Silas Marner*; Blackmore's *Lorna Doone*.

Group V (two to be selected).

Irving's *Sketch Book*; Lamb's *Essays of Elia*; De Quincey's *Joan of Arc* and *The English Mail Coach*; Carlyle's *Heroes and Hero Worship*; Emerson's *Essays*; Ruskin's *Sesame and Lilies*.

Group VI (two to be selected).

Coleridge's *The Ancient Mariner*; Scott's *The Lady of the Lake*; Byron's *Mazeppa* and *The Prisoner of Chillon*; Palgrave's *Golden Treasury (First Series)*, Book IV, with especial attention to Wordsworth, Keats and Shelley; Macaulay's *Lays of Ancient Rome*; Poe's *Poems*; Lowell's *The Vision of Sir Launfal*; Arnold's *Sohrab and Rustum*; Longfellow's *The Courtship of Miles Standish*; Tennyson's *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News from Ghent to Aix*, *Evelyn Hope*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *Incident of the French Camp*, *The Boy and the Angel*, *One Word More*, *Hervé Riel*, *Pheidippides*.

For 1912: As above with the following substitutions for the works of the authors named:

Group III. Spencer's *Faerie Queene* (Book I.)

Group V. Carlyle's *The Hero as Poet*, *The Hero as Man of Letters*, and *The Hero as King*; Emerson's *Essays* (selected).

Group VI. Tennyson's *The Princess*.

B. A special knowledge of the subject-matter, form and structure of the following works:

For 1911: Shakespeare's *Macbeth*; Milton's *Lycidas*, *Comus*, *L'Allegro*, and *Il Penseroso*; Burke's *Speech on Conciliation with America* or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration*; Macaulay's *Life of Johnson*, or Carlyle's *Essay on Burns*.

For 1912: Shakespeare's *Macbeth*; Milton's *Comus*, *L'Allegro*, and *Il Penseroso*, or Tennyson's *Gauth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Burke's *Speech on Conciliation with America*, or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration*; Macaulay's *Life of Johnson*, or Carlyle's *Essay on Burns*.

Candidates who pass the examinations of the C. E. E. B. (College Entrance Examination Board) in English **A** and **B** will be given credit for English **A** and **B**.

HISTORY.

Each candidate is examined in *two* (2) of the four subjects, A, B, C, D.

Outline maps will be furnished for the questions in historical geography which will form a part of each paper.

Extra credit will be given for student note-books giving abstracts of collateral reading, notes of lectures, or digests of the text-book used. Such books should be certified by the candidate's teacher.

A. Ancient history, with special reference to Greek and Roman history, and including also a short introductory study of the more ancient nations and the chief events of the early Middle Ages, down to the death of Charlemagne (814).

B. Medieval and modern European history, from the death of Charlemagne to the present time.

C. English history, with due reference to social and political development.

D. American history. The questions will be upon the four following topics:

1. Historical geography. Questions are to be answered by drawing on an outline map certain geographical boundaries.
2. The Colonial period.
3. The Revolutionary period.
4. The Constitutional period. Under this topic will be a few questions on civil government.

Candidates who pass the examinations of the C. E. E. B. in History A, B, C, D, will be given credit for the corresponding subjects above, viz: History A, B, C, D, respectively.

MATHEMATICS.**A. ELEMENTARY ALGEBRA.**

(i) *Algebra to Quadratics*.—The four fundamental operations for rational algebraic expression. Factoring, determination of highest common factor and lowest common multiple by factoring. Fractions, including complex fractions, ratio and proportion. Linear equations, both numerical and literal, containing one or more unknown quantities. Problems depending on linear equations. Radicals, including the extraction of the square root of polynomials and of numbers. Exponents, including the fractional and negative.

(ii) *Quadratics and Beyond*.—Quadratic equations, both numerical and literal. Simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations. Problems depending on quadratic equations. The binomial theorem for positive integral exponents. The formulas for

the n th term and the sum of the terms of arithmetical and geometric progressions, with applications.

C. PLANE GEOMETRY.—The usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle, and the measurement of angles; similar polygons; areas, regular polygons, and the measurement of the circle. The solution of numerous original exercises, including loci problems. Applications to the mensuration of lines and plane surfaces.

F. PLANE TRIGONOMETRY.—Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles. Proofs of principal formulas; in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product expressions for the sum of the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas. Solution of trigonometric equations of a simple character. Theory and use of logarithms (without the introduction of work involving infinite series). The solution of right and oblique triangles, and practical applications.

Candidates who pass the examinations of the C. E. E. B. in Mathematics **A (i)**, **A (ii)**, **C** and **F** will be given corresponding credit.

II.

ANCIENT AND FOREIGN LANGUAGES.

GREEK.

NOTE.—Questions on inflection, derivation, composition of words and on syntax will be asked under **B** and **C**.

B. XENOPHON: The first four books of the *Anabasis*.

C. HOMER: The first three books of the *Iliad* (omitting **II**, 484-end).

F. PROSE COMPOSITION: Continuous prose based upon Xenophon and other Attic prose of similar difficulty.

G. SIGHT TRANSLATION OF PROSE of no greater difficulty than Xenophon's *Anabasis*.

Candidates who pass the examinations of the C. E. E. B. in Greek **B**, **C**, **F**, **G** will be given corresponding credit.

LATIN.

NOTE.—Questions will be asked under **B**, **C** and **D**, on the inflection, derivation, and composition of words, on syntax, and on geography, history, and mythology.

B. CÆSAR: Four books of the *Gallic War*, preferably the first four.

C. CICERO: *Six Orations*. The order of preference is indicated in the following list: The four against Catiline, those of Archias, the Manilian Law, Marcellus, Sextus Roscius, Milo, Sestius, Ligarius, and the fourteenth Philippic.

D. VERGIL: The first six books of the *Æneid*, with the scanning of the dactylic hexameter.

M. TRANSLATION AT SIGHT: Prose of no greater difficulty than the easier passages in Cicero's *Orations*.

L. PROSE COMPOSITION: The translation into Latin of continuous English prose based upon passages of moderate difficulty in Cæsar or Cicero.

Candidates who pass the examinations of the C. E. E. B. in Latin B, C, D, L, M will be given corresponding credit.

FRENCH.

A. ELEMENTARY FRENCH.—Preparation for this examination should comprise (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; the order of words in the sentence, and the elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (4) the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

During the second year the work should comprise (1) the reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, prenominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About's *Le roi des*

montagnes, Bruno's *Le tour de la France*, Daudet's easier short tales, La Bédolliere's *Le Mère Michel et son chat*, Erckmann-Chatrian's stories, Foa's *Contes biographiques* and *Le petit Robinson de Paris*; Foncin's *Le pays de France*, Labiche and Martin's *La poudre aux yeux* and *Le voyage de M. Perrichon*, Legouv   and Labiche's *La cigale chez les fourmis*, Malot's *Sans famille*, Mair  t's *La t  che du petit Pierre*, M  rim  e's *Colomba*, extracts from Michelet, Sarcey's *Le si  ge de Paris*, Verne's stories.

Candidates who pass the examinations of the C. E. E. B. in French A will be given corresponding credit.

GERMAN.

A. ELEMENTARY GERMAN.—The preparation for this examination should comprise: (1) Careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also upon the use of the more common prepositions, the simpler uses of the model auxiliaries, and the elementary rules of syntax and word-order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (5) the reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

During the second year the work should comprise: (1) The reading of from 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in the translation into German of easy variations upon the matter read and also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill upon the rudiments of the grammar, directed to the ends of enabling the pupil, first, to use his knowledge with facility in the formation of sentences, and, secondly, to state his knowledge correctly in the technical language of grammar.

The following reading recommended in the report of the Committee of Twelve will furnish matter from which selections may be made by the teacher: Andersen's *M  rchen* and *Bilderbuch ohne Bilder*; Arnold's *Fritz auf Ferien*; Baumbach's *Die Nonna und der Schwiegersonn*; Gerst  cker's *Germelshausen*; Heyse's *L'Arrabi  ta*, *Das M  dchen von Treppi*, and *Anfang und Ende*; Hillern's *H  her als die Kirche*; Jensen's *Die braune Erica*; Leander's *Tr  u-*

mereien, and *Kleine Geschichten*; Seidel's *Märchen*; Stökl's *Unter dem Christbaum*; Storm's *Imensee* and *Geschichten aus der Tonne*; Zschokke's *Der zerbrochene Krug*; Hauff's *Das kalte Herz*. Among shorter plays the best available are perhaps Benedix's *Der Prozess*, *Der Weiberfeind*, and *Günstige Vorzeichen*; Elz's *Er ist nicht eifersüchtig*; Wichert's *An der Majorsecke*; Wilhelmi's *Einer muss heiraten*.

Candidates who pass the examinations of the C. E. E. B. in German **A** will be given corresponding credit.

III.

REPRESENTING SPECIAL SCIENTIFIC REQUIREMENTS FOR MEDICAL STUDIES.

Laboratory note-books, properly certified, must be submitted with diploma or certificate.

CHEMISTRY.

Credits for five collegiate units in General and Analytical Chemistry are prerequisites to the School of Medicine. These requirements are in general covered by the regular Freshman courses in chemistry in colleges recognized by this University. They are covered by courses 91 and 92 of the Department of Chemistry of this University. Credits in chemistry (whether by diploma, certificate or on examination) presented by candidates must be equivalent to said courses 91 and 92 of the Department of Chemistry of this University; and the valuations of credits in chemistry offered for admission to the School of Medicine will be determined by the head of said Department of Chemistry.

PHYSICS.

Credits for three units of collegiate physics are prerequisite for admission to the School of Medicine. These requirements are covered by the regular Freshman courses in physics in colleges recognized by this University. Course 601, A and B, of the Department of Physics of this University fulfills the requirements; all credits offered for matriculation physics must be judged equal to this course by the Head of the said Department of Physics.

GENERAL BIOLOGY OR GENERAL ZOÖLOGY.

Either General Biology or General Zoölogy may be offered for admission; preparation in either of these subjects presupposes a full year's course of five hours per week, or its equivalent, not less than two-thirds of the time being devoted to laboratory work, guided by definite directions; this should be supplemented by a study of some modern elementary text-book, such as the following:

T. Jeffery Parker, *Elements of Biology*; Sedgwick and Wilson, *General Biology*; Parker and Parker, *Practical Zoölogy*; Linville and Kelly, *General Zoölogy*.

The scope of the course should be similar to that outlined in the text-books named. Each student should keep a laboratory note-book in which to enter from day to day a record of the laboratory work done; this record should consist of carefully labelled outline drawings of the chief structures studied, and accurate notes of all observations, experiments or demonstrations which cannot be recorded by drawings. This note-book, properly certified by the teacher, must be submitted by the applicant for admission. The requirements here outlined are essentially similar to those specified by the College Entrance Examination Board for the subject of Zoölogy.*

IV.

REPRESENTING A MINIMUM OF WORK IN A FRESHMAN AND SOPHOMORE COLLEGIATE COURSE IN ARTS AND SCIENCE.

(Sufficient units to make up a total of 53 with those acquired from preceding groups.)

For description of appropriate branches representing this portion of the candidate's preparation, reference may be made to the College Fasciculus of the Annual Catalogue of the University.

The various studies are not here detailed; since considerable latitude of election exists in many colleges and more or less variation in prescribed courses also occurs in different college curricula. Such differences occasioned by election or by regular requirements of institutions will be adjudged by comparison with the work of the Freshman and Sophomore Classes of the College of the University of Pennsylvania.

ADVANCED STANDING IN SUBJECTS.

Any graduate in Arts or Science of a college recognized by this University who has completed any of the studies of the first year of the Medical Course, viz.: Physiological Chemistry, Bacteriology or Anatomy (excepting the Central Nervous System and the Organs of Special Sense), and who has passed satisfactorily the examination given by the professor of the respective branch in this medical school, may be excused from that portion of the study given in the first year of the course, provided that he utilizes the time sched-

* For detailed information of the requirements specified by the College Entrance Examination Board, candidates are referred to Thomas S. Fiske, Ph. D., Post Office Sub-station 84, New York City.

uled for that study in advanced work in Chemistry, Bacteriology or Anatomy, or other subject, according to his preference and capabilities; or in anticipating work of the second year in so far as the roster may permit.

ADMISSION TO ADVANCED STANDING.

Candidates for admission to advanced standing will be required to meet the admission requirements which were in effect at the time the class to which they are entitled to enter was admitted, in addition to the examination in the subjects italicized below.

Examinations for admission to advanced standing for the session 1911-12 may be taken in the new Medical Laboratories, beginning Monday, May 29, 1911, at 9 A. M., or Monday, September 25, 1911, at 2 P. M. All examinations must be passed before the beginning of the regular session, September 29, 1911, at 8 P. M.*

Candidates who have attended one course in a recognized regular medical school in which the required annual session is not less than eight months in length, are admitted to the SECOND-YEAR Class upon passing a satisfactory examination in *Physiological Chemistry*, *Anatomy* and in *Bacteriology*.

Candidates who have attended two courses in a recognized regular medical school in which the required annual session is not less than eight months in length, are admitted to the THIRD-YEAR Class upon passing a satisfactory examination in *Physiological Chemistry*, *Pathology*, *Physical Diagnosis*, *Bacteriology*, the entire subjects of *Anatomy* and *Physiology*, *Applied Anatomy* and *Pharmacology*.

Candidates who have attended three courses in a recognized regular medical school in which the required annual session is not less than eight months in length, are admitted to the FOURTH-YEAR Class upon passing a satisfactory examination in *Physiological Chemistry*, *Pharmacology*, *Bacteriology*, *Physical Diagnosis*, *Anatomy*, *Physiology*, *Applied Anatomy*, *Pathology*, *Therapeutics*, *Medicine*, *Surgery*, *Obstetrics*, and *Ophthalmology*.

Graduates of recognized regular medical schools, in which the required annual session is not less than eight months in length, and in which four years' attendance upon instruction is required to obtain the degree in Medicine, are admitted to the FOURTH-YEAR Class with the understanding that they pass examinations in *Obstetrics*, *Therapeutics*, *Pathology* and *Gross Pathology*, either at the beginning or at the end of the fourth year, in addition to the regular examinations of that year.

* Students from other colleges who have not had practical work in the subjects here taught in laboratory courses equivalent to that done in this institution will be required to make up such deficiency by taking special courses in such branches.

PART III.

METHODS AND SUBJECTS OF INSTRUCTION. UNDERGRADUATE.

UNDERGRADUATE INSTRUCTION.

The course of instruction extends over a period of four years, with one session in each year, beginning on the last Friday of September and ending on the third Wednesday in June.

The course may be said to be divided into two periods of two years each: the first period devoted to the fundamental medical sciences, Chemistry, Anatomy, Physiology, Bacteriology, Pharmacology and Pathology, including also Physical Education; the second period to the clinical subjects, Medicine, Surgery, Obstetrics and the specialties.

FIRST PERIOD.

The subjects of the first two years have been arranged according to a modification of the concentration system. By this system the student is enabled to concentrate his energy upon one or two subjects, and must master these before he is allowed to continue the course. Thus the first year is devoted chiefly to anatomy, including embryology, normal histology and osteology, and to physiological chemistry, and bacteriology.

The subjects of the second year follow in logical sequence those of the year preceding. The time of the second year is thus given over largely to physiology, pathology, pharmacology and applied anatomy. In addition to these the work of the second year includes a course in physical diagnosis.

Instruction upon the subjects of the first two years is almost entirely practical, so that the greater part of the student's time is spent in the laboratories. In the new Laboratories of Pathology, Physiology and Pharmacology, which were opened in June, 1904, and in the bacteriological section of the Laboratory of Hygiene, as well as in the older Laboratories of Gross and Minute Anatomy, the students of this department are afforded unsurpassed facilities for practical work in these fundamental subjects.

SECOND PERIOD.

With the beginning of the third year the student enters upon the second period, which covers the third and fourth years, and is devoted almost exclusively to instruction in the so-called clinical subjects—Medicine, Surgery, Obstetrics and the specialties. There is no sharp dividing line between the work of the third and fourth years, so that the courses in the clinical subjects may be said to cover a period of two years.

From a glance at the tabular representation of the hours of instruction for the third and fourth years (later pages), it will be seen that arrangements have been made to keep the student fully

occupied throughout each day. No especial opportunities are offered the student to engage in special lines of work before he graduates. In point of fact, any desire to specialize before graduation is rather discouraged. It has always been the object and aim of this institution to prepare its students for the practice of general medicine, not to graduate them as "specialists." *Its policy has been to offer the student a well-graded, well-proportioned and comprehensive course*, so that upon his graduation he stands prepared to *practice* medicine. Should he decide to take up a specialty or to engage in teaching or investigation after graduation, he will be the better prepared by his broad education, and still better prepared if he has had several years of clinical experience.

The methods of instruction are varied, but mostly practical. The latter include ward visits, ward classes, clinical conferences and practical observation in the wards and out-patient department of the University Hospital. Systematic lectures, general clinics and recitations have been found indispensable, but play a less conspicuous part in the course.

The facilities for instruction are abundant. It is possible to offer to each student opportunities to come into personal contact under proper supervision with a large and varied series of cases. The University Hospital, with its capacity of 344 beds, is operated exclusively for the benefit of the School of Medicine. Adjoining the University campus is the Philadelphia General Hospital, with a capacity of 1600 beds, where the wards are open to both teachers and students throughout the year; this not including the adjoining Philadelphia Insane Hospital, with over 2000 beds, also available for teaching purposes. Material advantage is had, too, by the students of the Fourth-Year Class in attendance in sections upon the work of the Phipps Institute for the Study, Prevention and Cure of Tuberculosis, recently acquired by the University through the generosity of Mr. Henry Phipps.

In addition, extramural teaching is conducted in the Children's, the German and Pennsylvania Hospitals by members of the teaching staff. A voluntary course upon the contagious diseases, conducted at the Municipal Hospital, is offered to the members of the Graduating Class.

ANATOMY.

- GEORGE A. PIERSOL, M. D.,..... *Professor of Anatomy.*
T. TURNER THOMAS, M. D.,..... *Associate Professor of Applied Anatomy.*
GEORGE FETTEROLF, M. D.,..... *Demonstrator of Anatomy.*

WILLIAM H. F. ADDISON, M. B.,.....	<i>Demonstrator of Histology and Embryology.</i>
WALTER S. CORNELL, M. D.,.....	<i>Demonstrator of Osteology.</i>
J. REX HOBENSACK, M. D.,.....	} <i>Assistant Demonstrators of Anatomy.</i>
JOHN J. ROBRECHT, M. D.,.....	
RICHARD F. GERLACH, M. D.,.....	
WM. E. QUICKSALL, M. D.,.....	
HOWARD A. SUTTON, M. D.,.....	
WALTER S. CORNELL, M. D.,.....	
WARREN C. GOODWIN, M. D.,.....	
PENN-GASKELL SKILLERN, M. D.,.....	} <i>Assistant Demonstrators of Histology.</i>
NATE GINSBURG, M. D.,.....	
GEORGE H. CHAMBERS, M. D.,.....	
WILLIAM R. WATSON, M. D.,.....	} <i>Prosecutor to Professor of Anatomy.</i>
ISAAC WELSH BROWN, M. D.,.....	
ASTLEY P. C. ASHHURST, M. D.,....	<i>Prosecutor to Associate Professor of Applied Anatomy.</i>
FRANCIS S. CHAMBERS, M. D.,	} <i>Volunteer Assistants in Anatomy.</i>
S. BYRON GOLDSMITH, M. D.,.....	
ERWIN F. FABER,.....	<i>Instructor in Drawing.</i>

Of the following courses in Anatomy, I to IX, inclusive, are required of candidates for the degree of Doctor of Medicine. All are completed during the first year, except Courses III and XI, which are completed during the second year. Courses X to XIV are not required, but may be taken by students who have had satisfactory preparatory training.

I. SYSTEMATIC ANATOMY OF THE ORGANS. *Professor Piersol.*—October 1 to February 21; two hours weekly.

II. ANATOMY OF THE CENTRAL NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE. *Professor Piersol.*—February 1 to May 28; two hours weekly.

III. COURSE IN APPLIED ANATOMY.—October 1 to May 21; two hours weekly.

IV. LABORATORY COURSE IN GENERAL HISTOLOGY. *Dr. Addison and assistants.*—October 1 to December 23; each section two mornings weekly.

V. LABORATORY COURSE IN THE HISTOLOGY OF ORGANS. *Dr. Addison and assistants.*—January 1 to April 1; each section two mornings weekly.

VI. LABORATORY COURSE IN EMBRYOLOGY. *Dr. Addison and assistants.*—April 1 to May 21; each section two mornings weekly.

VII. OSTEOLOGY. *Dr. Cornell*.—October 1 to February 1; one hour weekly.

VIII. LABORATORY COURSE IN OSTEOLOGY. *Drs. Cornell and Sutton*.—October 3 to November 19; each section ten hours for seven weeks.

IX. PRACTICAL STUDY OF THE BODY BY DISSECTION. *Dr. Fetterolf and assistants*.—October 1 to May 21; each section two hours daily for periods of seven weeks.

X. SPECIAL COURSE ON ANATOMY OF SENSE ORGANS. *Professor Piersol*.—February 1 to May 15; Wednesday mornings.

XI. SPECIAL COURSE IN ANATOMY OF FRACTURES AND LUXATIONS.—

XII. ADVANCED LABORATORY COURSE IN VERTEBRATE EMBRYOLOGY. *Professor Piersol and Dr. Addison*.—October 15 to May 1; mornings.

XIII. LABORATORY COURSE IN MICROSCOPICAL TECHNIQUE. *Professor Piersol and Dr. Addison*.—April 1 to May 15; three mornings weekly.

XIV. ADVANCED WORK AND ORIGINAL INVESTIGATION. *Professor Piersol*.—October 15 to May 15.

Courses I and II, two lectures a week throughout the session, present the principles, as well as details, of human anatomy, including structure and development. Especial pains are taken to impress the broader morphological significance of the details of human anatomy. These courses are exceptionally well illustrated by means of charts, lantern, models, museum preparations and fresh dissections, the unusual resources of the Wistar Institute of Anatomy and Biology being additionally available, not only for class-instruction, but also for individual study.

Courses IV and V occupy two mornings each week, until April 1, during which time the student is required to mount, study and draw preparations of all of the important tissues and organs of the human body, as well as to learn the methods employed in their preparation.

Course VI is devoted to the mounting and study of series of chick and mammalian embryos. The laboratory is equipped with excellent microscopes of recent model, and supplied with the most approved apparatus for histological and embryological work.

Course VIII, in the osteological laboratory, is conducted for a period of forty-two days, two hours daily. The exercises include the detailed study of the skeleton, each student being provided with bones which he is required to draw, noting the important features and principal muscular attachments. The joints are also studied on finished dissections. Bones are loaned to students upon

conditions similar to those governing the issue of books from a library.

Course IX forms a most important part of the first and second year work, every student being required to carefully dissect and pass practical examination upon the cadaver. The class works at least two hours daily under the close supervision of the Demonstrator of Anatomy and his assistants. Excellent and abundant dissecting material is assured by the improved methods of preservation and the facilities for cold storage. Opportunity for additional work is afforded to students who desire to devote more time to practical anatomy.

Course III is a continuation of the study of anatomy, but from the standpoint of its application, and not as an abstract science. The course embraces surface anatomy, the outlines of the organs, the position of the joints, significance of bony points, muscular swells, the position and means of recognizing the various nerves and arteries; the influence of the muscles in fractures; the construction of joints in reference to luxations; a knowledge of the parts incised in amputations; how the parts influence and direct the progress of abscesses; a knowledge of the lymphatics in reference to pyogenic and carcinomatous infections; a knowledge of the position and relation of the abdominal organs necessary for diagnostic and operative purposes; also those of the chest; cerebral localization, paralysis, etc., and innumerable other facts. Attention is given to the relation of the various tissues and organs to each other, so that the operations on those parts may be understood. It is the object of the course to present to the student the subject of anatomy in such manner as to enable him to utilize it in forming diagnoses and applying methods of treatment.

Instruction is given by demonstrations. These embrace the living and dead body and anatomical preparations. Special dissections and preparations are made to illustrate and explain fractures, dislocations, amputations, ligation of arteries, the position and relation of organs by frozen sections, etc., and also by injections of wax, the affections of the joints, palmar and other abscesses, etc.

Two minor examinations are given during the term and a final one, both written and practical, at the completion of the term.

BACTERIOLOGY AND HYGIENE.

ALEXANDER C. ABBOTT, M. D.,... PEPPER *Professor of Hygiene and Bacteriology.*

DAVID H. BERGEY, M. D.,..... *Assistant Professor of Bacteriology.*

NATHANIEL GILDERSLEEVE, M. D., *Associate in Bacteriology.*
HARRY A. SCHATZ, M. D., *Second Assistant in Bacteriology.*
SYLVESTER J. DEEHAN, M. D., *Third Assistant in Bacteriology.*

BACTERIOLOGY.

I. LECTURES. *Professor Abbott.*—A course of lectures preparatory to the practical work of the first-year students is given, one lecture weekly, during the first term. This course comprehends those elementary phases of the subject with which the student should be familiar at the time he begins his practical work.

II. LABORATORY COURSE. *Professor Abbott, Drs. Bergey and Gildersleeve.*—The course of lectures is followed by the laboratory exercises. These begin February 1 and continue until the end of the year.

The number of hours given to the practical work in this branch is about seventy to each student of the First-year Class. During this time students receive instruction in the use of the microscope in bacteriological work; the methods of cultivating bacteria and of isolating them in pure cultures; the steps necessary to the identification of particular species of bacteria; the relation of bacteria to infection; and the methods of sterilization and disinfection. Such students as demonstrate ability to advance beyond the class work are given the opportunity to do so, and are encouraged to pursue such studies providing the latter do not interfere with hours assigned to other subjects.

The course in detail covers the following subjects:

1. Apparatus employed—sterilizers, incubators, pressure regulators, thermostats, etc.
2. Culture media, methods of preparation, sterilization methods.
3. Characteristics of cultures of bacteria in general and of special forms.
4. Methods of obtaining, from mixtures of different bacteria, individual species in pure cultures.
5. Microscopic technique. Use and care of instruments, staining from cultures, section cutting, and staining and mounting of tissues.
6. Pathogenic bacteria isolation, identification and inoculation.
7. Disinfection, thermal and chemical, methods and apparatus, modes of testing efficiency.
8. Bacteriological investigation of water.
9. Bacteriological investigation of air.
10. Bacteriological investigation of soil.

HYGIENE.

III. LECTURES. *Professor Abbott.*—The teaching in Hygiene consists of a course in systematic lectures to the Fourth-year Medical

students, and of practical exercises in the laboratory. The didactic course is compulsory for all students receiving the degree of Doctor of Medicine, while the practical course is voluntary.

The lectures are given once weekly throughout the year. They cover the following topics of general sanitary importance:

A consideration of the factors concerned in the direct causation of disease, and the manifold conditions of life that indirectly favor the occurrence of disease among individuals, groups of individuals and communities.

A brief sketch of the important transmissible and epidemic diseases, embracing a discussion of their modes of transmission, portals of infection, geographical and seasonable distribution and the approved methods of their prevention.

A consideration of prophylaxis in general, embracing disinfection and disinfectants, protective vaccination and the anti-toxic state, the disposal of the dead after infectious diseases, and quarantine.

The atmosphere, from the chemical, physical, and biological standpoints; the air of enclosed spaces; the problems of ventilation and heating; the various pollutions of the atmosphere, such, for instance, as those from the soil, from industries, from sewers, etc., and their influence on health and disease.

Water—its sanitary significance; the characteristics of waters from various sources and their suitability to domestic needs; the pollutions to which waters from different sources are liable; the biological significance of these pollutions; interpretations of the results of analyses; natural and artificial purification of waters; the relation of water to health and disease.

Sewage—the part taken by the soil and its constituents in the disposal of organic waste; the characteristics of sewage from different sources; the various methods for the disposal of sewage; the influence of sewage disposal upon the health of communities.

IV. PRACTICAL COURSE. *Professor Abbott and Dr. Bergey.*—The following subjects, arranged especially for the needs of those students intending to enter upon the practical pursuit of sanitary work, are taken up:

1. The atmosphere, climate and meteorological observations and records, chemical analysis, bacteriological investigation, methods of investigation, methods of ventilation and heating.

2. Water—physical, chemical and bacteriological investigation of water-supplies; methods of obtaining samples; qualitative and quantitative analysis for impurities; collection, storage and purification of water intended for domestic use; effects of filters, aeration, etc.

3. Sewage disposal, sewers, house drainage and the air of sewers.

4. Disposal of refuse, cremation of garbage, etc.
5. Soils and building sites, physical, chemical and bacteriological investigation, soil and moisture, ground air.
6. Foods—adulteration, milk and meat inspections.
7. Clothing—microscopic examination, poisonous dyes.
8. Management of contagious diseases. Practical tests of different methods of disinfection, chemical and thermal; notification, isolation and quarantine.
9. Vital statistics, registration and methods of tabulation.
10. Offensive and dangerous trades.

V. COURSE IN PUBLIC HEALTH. (See pages 80 to 82.)

VI. ORIGINAL INVESTIGATION. In addition to the foregoing set courses, facilities are offered by the Laboratory for special work. Students and graduates of this school or elsewhere will find opportunities for advanced work in any of the subjects properly coming within the scope of the Laboratory. Arrangements for such work can be made by correspondence with the Director of the Laboratory.

CHEMISTRY AND TOXICOLOGY.

JOHN MARSHALL, M. D., NAT. SC. D., LL. D., *Professor of Chemistry and Toxicology.*

DANIEL W. FETTEROLF, M. D.,.....*Demonstrator of Chemistry.*

LEON A. RYAN, PH. D.,.....*Assistant Demonstrator of Chemistry.*

PHYSIOLOGICAL CHEMISTRY.

ALONZO ENGLEBERT TAYLOR, M. D., BENJAMIN RUSH *Professor of Physiological Chemistry.*

.....*Instructor in Physiological Chemistry.*

.....*Assistant Instructor in Physiological Chemistry.*

Instruction in Physiological Chemistry is given during the first year of the medical course. The schedule includes three hours of lectures, two hours of recitation and twelve hours of laboratory work per week for one-half of the academic year. Since all students enter the department with one year of collegiate chemistry and physics, the work of the course of physiological chemistry is confined to organic and strictly physiological chemistry. Following a brief survey of the field of organic chemistry, the course of instruction comprises a systematic survey of the whole field of physio-

logical chemistry, particular attention being devoted to metabolism. The viewpoint of the course is physiology, interpreted from the modern concepts of physics and chemistry. Especial attention is paid to the instruction in analysis, in order that the future physician may be properly equipped to judge and to use approved physical and chemical methods in the investigation of morbid physiology.

The research laboratories of the department are open to workers qualified to undertake original investigations in physiological chemistry.

Graduate Work: Qualified students may elect physiological chemistry, in accordance with the regulations of the Graduate Council.

PHYSIOLOGY.

EDWARD T. REICHERT, M. D.,..... *Professor of Physiology.*

EDWARD LODHOLZ, M. D.,..... *Demonstrator of Physiology.*

REUBEN A. BOGIA, M. D.,.....

* J. GARRETT HICKEY, D. D. S.,.....

DAVID M. P. MAGEE, M. D.,.....

FRANK B. BAIRD, M. D.,.....

FREDERICK O. WAAGE, M. D.,.....

JAMES GARRETT MCCOLLIN, M. D.,....

} *Assistants in Physiology.*

The instruction in Physiology embraces systematic courses of lectures, practical work by the student, demonstrations and conferences given during and extending throughout the second year. The students, therefore, before entering upon their work in this department, have been trained in Physiological Chemistry, Anatomy and Normal Histology.

I. LECTURES. *Professor Reichert.*—Four lectures a week on the general subject of Nutrition, from October 1 to February 1.

II. LECTURES. *Professor Reichert.*—Four lectures a week on the Heat Mechanism and the Nervous and Muscular Systems, from February 1 to May 29.

The lectures are copiously illustrated by tables, charts, diagrams and drawings, this being supplemented and considerably extended by the courses of instruction in the demonstration-room and laboratory.

III. STUDENTS' LABORATORY WORK, IN ILLUSTRATION AND EXTENSION OF COURSE I. *Professor Reichert, Dr. Lodholz and assistants.*

IV. STUDENTS' LABORATORY WORK, BEARING A SIMILAR RELATION TO COURSE II. *Professor Reichert, Dr. Lodholz and assistants.*

* On leave of absence.

The course of practical work has been carefully and systematically planned, chiefly upon the *inductive* method of instruction, and seven hours a week are assigned to each student for this work, together with demonstrations and conferences. The main objects sought in the laboratory are: the illustration of the lectures by the most impressive methods; the supplementation of collateral work to further impress important fundamental facts and broaden their application; the training in the use of instruments of precision, with especial reference to the use of apparatus in clinical and experimental medicine; the cultivation of the individual's powers of observation and deduction: the encouragement of accuracy of expression and method, of collateral work, and the co-ordination of facts.

The instruction in the practical work is given under the direction of the Professor of Physiology by the Demonstrator and his assistants. Each student is assigned a table and the necessary apparatus, and works under the direct supervision of the teaching staff. He is directed in technique and in what to observe, but he is self-dependent as to his results and conclusions, which he must present for examination in the form of "graphic records" and written records at the end of each exercise.

V and VI. DEMONSTRATIONS. *Dr. Lodholz and assistants.*—Two corresponding series of demonstrations, which take the place of practical work when the latter is of a character too difficult or otherwise undesirable for the student to pursue; as, for instance, work involving the use of complicated or very expensive apparatus, the employment of mammals, etc. These demonstrations are given in their proper relation to other instruction in physiology.

VII. CONFERENCES. *Dr. Lodholz and assistants.*—Conferences, which cover the subject-matter of the lectures, are held at appropriate times.

VIII. JOURNAL CLUB. Recent work in Physiology is reported by the members of the department, and by those actively engaged in research and advanced work in the laboratories.

IX. SEMINAR. Problems under investigation in the department are introduced for the mutual advantages of discussion. Conducted by Professor Reichert and the staff of the department.

X. GRADUATE COURSES. *Professor Reichert.*—These courses are arranged to suit the requirements of those presenting themselves for the work. Rooms and apparatus are placed at the disposal of such students, and every facility is offered for the prosecution of research.

XI. ELECTIVE COURSES IN ADVANCED PHYSIOLOGY. *Professor Reichert.*—These are offered to students of the third and fourth years in

Medicine. The intention is to give to those who may desire it an opportunity to continue the laboratory work of the previous year in ways that are impossible with large classes, and as a foundation for the prosecution of research.

XII. RESEARCH. The laboratory offers all the advantages of its facilities and equipment for the investigation of problems in Physiology. This may be arranged for at any time by communicating with Professor Reichert.

PATHOLOGY.

RICHARD M. PEARCE, M. D. *Professor of Pathology.*

HOWARD T. KARSNER, M. D., *Demonstrator of Pathology.*

BORDEN S. VEEDER, M. D., }

J. H. AUSTIN, M. D., } *Assistant Demonstrators of*

A. B. EISENBREY, M. D., } *Pathology.*

F. D. WEIDMAN, M. D., }

ERWIN P. FABER, *Instructor in Drawing.*

Instruction in Pathology extends throughout the second and third years of the medical curriculum. The plan of instruction embraces a general course in pathology under the direct supervision of the chair of Pathology, and a group of courses of applied special pathology, limited to the third year, in charge of the staff of instructors of the clinical branches concerned. In this latter group, which looks eventually toward the presentation of all special applications advantageously taught by laboratory methods, there have thus far been organized laboratories of Surgical Pathology, Clinical Pathology, Neuro-pathology, Gynecological Pathology, Ophthalmologic Pathology and Otological Pathology. In each division of the subject except the last three named, the plan of teaching includes systematic lectures, demonstrations and practical class exercises.

GENERAL AND SPECIAL PATHOLOGY.—*Professor Pearce and Drs. Karsner, Veeder, Austin, Weidman and Eisenbrey.*

SECOND-YEAR CLASS.—One lecture each week for the first half of the term is devoted to the various elementary pathological processes. In the laboratory of pathological histology, each student devotes seven hours each week to the study of illustrative tissues by the microscope, the gross features of the process discussed being correlated by daily demonstration of fresh and museum material in the laboratory. The projection microscope is employed as an additional means of demonstration of the histological preparations,

the essential features of each lesion being pointed out upon the screen, whenever such demonstration is considered advantageous. Each week also one hour is devoted to a general lantern demonstration and one hour to a recitation-conference, these exercises being given by the head of the department.

In the second half of the year instruction in special pathology of the various organs is taken up in the same way, and in addition, two hours a week are devoted to demonstrations in pathological physiology.

In the third year lectures on pathological physiology and special pathology are given by Drs. Pearce and Karsner one hour each week, during the first half year and on pathological chemistry during the second half year by Professor A. E. Taylor, of the Department of Physiological Chemistry.

During the same period each student, for one and a half hour each week, studies the accumulated autopsy material and especially selected and museum preparations by the "case" method. After a preliminary demonstration of the method of performing autopsies, the class is divided into small sections, and as autopsies are being performed in the University Hospital and Blockley Hospital, the students are required to attend, and participate in the work. In the fourth year the students of the various ward classes in the University Hospital attend the autopsies upon those subjects with whose clinical course each class has been familiar in the wards; special instruction, attempting to correlate the pathological findings with the known symptoms of the case in life, being given. Opportunity for the completion of such investigations by histological and bacteriological methods is afforded the student in the laboratories of the department.

ADVANCED WORK.—With the increased space and added facilities afforded by the McManes Laboratory of Pathology the department offers to advanced and post-graduate students special courses in experimental pathology, pathological histology, museum and autopsy work; and opportunity is afforded those suitably trained to undertake special investigations.

PHARMACOLOGY.

ALFRED N. RICHARDS, PH. D.....*Professor of Pharmacology.*
WILSON G. WOOD, M. D.,.....*Demonstrator of Pharmacology.*
DANIEL M. HOYT, M. D.,*Instructor in Pharmacology.*
_____ *Assistant Demonstrator of Pharmacology.*

FIRST YEAR WORK.—During the present year, no work in *Materia Medica*, Pharmacy or Prescription Writing is given to the First-year Class; in the future, instruction in these branches, equivalent to that heretofore offered in the first year, will be included in the work of the second year.

SECOND AND THIRD YEAR WORK.—During the present year, instruction in Pharmacology is given to both the Second and Third-year Classes; in the future, however, this work will be confined mainly to the second year.

The course in Pharmacology consists of lectures, laboratory work and recitations. In the lectures (three hours a week for the Third-year Class during the first half-year, two hours a week for the Second-year Class during the second half-year) the physiological action of the important drugs used in medicine is systematically considered, the features in action which are most significant from therapeutic and toxicological standpoints being emphasized.

The laboratory work is devoted to the practical study of drug action. For this work the class is divided into sections small enough to insure thorough supervision. Each section is subdivided into groups of two, three or four men, as occasion demands, and each of these smaller groups performs experiments upon the action exerted by drugs upon the important physiological mechanisms—nervous system, respiration, circulation, the kidney, gastro-intestinal tract and the eye. Three hours a week during the half-year is required for this work.

Two recitations a week for each student (optional for third-year, required of second-year students) cover in an informal way the subjects studied in lectures, laboratory and text book.

During the second half-year for third-year students a course of one hour a week is given, which requires the study of Pharmacology in its relation to definite problems in the treatment of disease, and which is supplementary as well to the course in prescription-writing previously given in the first year. In it histories of cases in the University Hospital, previously studied by the instructor-in-charge, are given to the student, with the requirement that he outline the rational drug treatment indicated and write prescriptions to cover it. These outlines and prescriptions are critically discussed in connection with the results of the treatment which was actually applied in each case.

RESEARCH.—The Laboratory of Pharmacology is open for research to a limited number of qualified workers.

MEDICINE.

JAMES TYSON, M. D., LL. D.,.....	<i>Emeritus Professor of Medicine.</i>
DAVID L. EDSALL, M. D.,.....	<i>Professor of Medicine.</i>
JOHN H. MUSSER, M. D., LL. D.,..	} <i>Professors of Clinical Medicine.</i>
ALFRED STENGEL, M. D., Sc. D., ..	
M. HOWARD FUSSELL, M. D.,	} <i>Assistant Professors of Medicine.</i>
**ALOYSIUS O. J. KELLY, M. D., .	
DAVID RIESMAN, M. D.,	
JOSEPH SAILER, M. D.,	
WARFIELD T. LONGCOPE, M. D.,....	<i>Assistant Professor of Applied Medicine.</i>
WILLIAM PEPPER, M. D.,	<i>Assistant Professor of Clinical Pathology.</i>
ARTHUR A. STEVENS, M. D.,	<i>Lecturer on Medicine.</i>
B. FRANKLIN STAHL, M. D.,.....	<i>Lecturer on Dietetics of the Sick.</i>
HERMAN B. ALLYN, M. D.,	} <i>Associates in Medicine.</i>
GEORGE W. NORRIS, M. D.,.....	
H. R. M. LANDIS, M. D.,.....	
JOHN M. CRUCE, M. D.,	} <i>Instructors in Medicine.</i>
ALBERT P. FRANCINE, M. D.,	
CLIFFORD B. FARR, M. D.,	
FRED H. KLAER, M. D.,	
THOMAS A. COPE, M. D.,	
*RALPH S. LAVENSON, M. D.,	
E. H. GOODMAN, M. D.,.....	
GEORGE MORRIS PIERSOL, M. D.,...	
FRANK A. CRAIG, M. D.,.....	
ROBERT G. TORREY, M. D.,.....	
C. M. MONTGOMERY, M. D.,	} <i>Assistant Instructors in Physical Diagnosis.</i>
J. T. ULLOM, M. D.,	
G. J. SAXON, M. D.,	} <i>Assistant Instructors in Medicine.</i>
SAMUEL BRADBURY, 3D,.....	
HOWARD KENNEDY HILL, M. D., .	
THOMAS C. KELLY, M. D.,	
W. G. TURNBULL, M. D.,.....	

The instruction in Medicine begins in the middle of the second year and is carried on continuously until the end of the course. In the second year the student is taught the principles of physical diagnosis, and the use of the methods of physical examination; also application of his knowledge of the Medical Sciences to a comprehension of normal and disturbed body processes and their bearing upon the principles employed in treating disordered function.

* On leave of absence.

** Deceased.

In the third year he has systematic instruction in Medicine; a systematic course, illustrated with clinical material, on the principles of therapeutics; and observation classes and ward classes in Medicine. The latter are partly in the form of objective demonstrations of cases, partly systematic instruction and practice in history taking and in making general physical examinations.

In the fourth year he has medical clinics so arranged as to illustrate systematically all important diseases excepting the highly contagious diseases and those not seen in this part of the world. He likewise has clinical conferences and ward classes, and spends many hours in the wards working on his own responsibility upon the examination and diagnosis of cases under his special observation and under supervision, suggesting the treatment of these cases.

The required work is chiefly in the University Hospital, though a large share of it is in the Philadelphia Hospital and the Phipps Institute, and some is given at the Pennsylvania Hospital. There are extensive opportunities for additional clinical work in the University Hospital and in various other hospitals, especially during the vacation periods, and a large number of students take advantage of these opportunities.

In a general way, it may be said that direct teaching and demonstration are freely used in the earlier part of the course, but as he gains more facility the student is largely thrown upon his own resources, though his work is constantly supervised; and systematically planned instruction is continued until the end of the course, chiefly didactic in the third year, chiefly clinical in the fourth year.

The practical work in the third and fourth years has recently been very greatly increased, and that in the second year so arranged that each student will get much more individual practice than heretofore.

SECOND YEAR.

PHYSICAL DIAGNOSIS.—*Dr. Longcope* gives lectures and demonstrations on physical diagnosis one hour a week during the last half of the year. These are devoted to an exposition of the general principles of the subject rather than to a study of the physical signs in special diseases.

In addition to the lectures, each student has two hours' practical work a week under Drs. Longcope, Saxon and Bradbury, the class being divided into small sections. These classes are devoted almost entirely to normal conditions, the signs of disease being used only as an occasional contrast to the normal, the actual study of signs of special diseases being carried out in the third year.

Also for one hour a week each student has a course in the depart-

ments of Research Medicine and Pharmacology under Professors Pearce and Richards and Dr. Eisenbrey, in collaboration with Dr. Longcope, on Physiological Pathology in its direct bearing upon the principles of clinical diagnosis and treatment.

THIRD YEAR.

SYSTEMATIC COURSES.—*Dr. D. Riesman*, continuing *Dr. Kelly's* course, gives two hours a week, partly didactic and partly in the form of recitations, in which the entire subject of Medicine is covered systematically. The students are required to appear, prepared upon diseases or groups of diseases assigned for the particular hour. Drawings, charts, casts, etc., from the George B. Wood, Stillé and Pepper collections, and also others recently added, are used in illustration. Attention also is devoted to discussion of certain conspicuously important disorders of function or symptoms, such as disorders of vascular tension, edema and the like, which are difficult for the student to comprehend in their general relations.

Professor Edsall gives one hour a week to discussing systematically the principles of the therapeutic use of drugs and other measures, constantly using patients to illustrate the types of conditions against which treatment is employed.

OBSERVATION CLASSES.—*Dr. Fussell* conducts these classes, and follows the special purpose of training the student's powers of observation in recognizing the meaning of the objective signs of disease. The class is divided into thirds, and each section receives twenty-four hours of this form of instruction.

WARD CLASSES.—*Drs. Stevens, Allyn, Norris, Klaer, Piersol, Goodman, Torrey and Turnbull* conduct these classes in the Philadelphia Hospital and in the Dispensary of the University Hospital. The class is divided into small sections, and each section has two hours of this work each week, besides additional hours devoted to individual instruction in history taking and the making of general complete physical examinations. Besides the last mentioned purpose, these classes are devoted to objective study and demonstration of the physical signs of disease and the clinical laboratory findings in the cases seen. These classes supply the next step beyond the section work of the second year on normal persons.

Besides the regular work, many students avail themselves of the opportunities offered to act as clerks in the Dispensary of the University Hospital throughout the year, and in the same place or elsewhere during vacations.

CLINICAL LABORATORY COURSE.—*Dr. Pepper* gives a lecture and demonstration one hour a week to the third-year class, and together

with Drs. Cope and T. C. Kelly conducts the laboratory exercises. In these the class is divided into sections, each section receiving $2\frac{1}{2}$ hours' work each week, in practice on the methods of chemical and microscopical examination of the urine, blood, sputum, stomach contents, feces, etc.

FOURTH YEAR.

SYSTEMATIC CLINICS AND CONFERENCES.—*Professors Edsall, Musser and Stengel* take up among them, in systematically subdivided form, the discussion in clinics of all the important medical conditions, so that the whole subject is thus illustrated systematically, in so far as this is feasible—dangerously contagious diseases and others that do not occur in this region being, of course excepted. The students take active part in the discussion of the cases.

Professors Musser and Stengel each have also two conferences a week, an hour and a half in length, in which they give a systematically planned course. In the conferences, students who have prepared themselves previously on the cases are called to the bedside before the class and discuss the cases with the lecturer, and at times contribute short papers on specially assigned subjects. The class is divided into halves for these conferences.

In all the above classes the students in charge of the case are required to report completely on the case in hand, including the history and general examination and any desirable clinical laboratory findings, the examination of the blood and urine being always required.

The conferences deal especially with questions of diagnosis or treatment. The clinics are general in their scope.

WARD CLASSES.—*Drs. Riesman and Sailer* meet sections three times weekly at the Philadelphia Hospital in advanced ward classes which deal especially with differential diagnosis and treatment. *Drs. Francine and Turnbull* meet one-third of the class for two hours each week and demonstrate especially important cases from the rich material in the tuberculosis wards at the Philadelphia Hospital.

WARD WORK.—The medical ward work is arranged in periods of five weeks' continuous service on the medical ward at the University Hospital, five weeks at the Philadelphia Hospital and five weeks at the Phipps Institute. At the latter place the work is subdivided into a period in the wards studying non-tuberculous subjects under Dr. Craig, work in the Dispensary on cases of varied character under Drs. Landis, Ullom and Montgomery, attendance at "tuberculosis classes" under Dr. Landis, and a period of service outside under Mr. Wilson in the social work of the Institute in which the

student has opportunity to learn to meet some of the problems of home treatment as regards general hygiene, diet, occupation and various other practical problems of treatment, especially among the poor. In addition to the remarkable opportunities for studying chest disorders especially, that the Phipps Institute affords, a striking collection of anatomical and pathological preparations has been provided there which greatly illuminate questions of chest diagnosis.

At the University Hospital there are regular ward rounds on four days of the week by Professor Edsall and Dr. Longcope, and at the Philadelphia Hospital by Dr. Pepper, Dr. Harris and Dr. Farr. Some of these teachers are also in the wards practically all of each morning, and the students are thus under supervision constantly, and advice is always at hand; but their work is done by themselves, and at the ward rounds reports are made to the instructor on the nature, progress, etc., of each case by the student assigned to it, each student having several cases under his care. The group have opportunity to see all special kinds of treatment that goes on in the ward and to follow, and to some extent to suggest, the treatment of the cases under observation. For one hour each week, Professor Edsall meets the group working at the University Hospital and the Phipps Institute in a conference on their ward work of the week.

Each student thus gets fifteen weeks' experience in medicine in his mornings, which is comparable to that of a hospital interne, with added constant aid and advice from senior instructors.

LABORATORY WORK.—Each student of the Fourth-year Class is supplied with a working place in the New Clinical Laboratory, which is immediately adjacent to the hospital wards, where he is furnished with a locker containing all necessary apparatus. He is required to make routine examinations, in which assistance is available when needed, of all material from patients assigned to him in any of the departments during his final year. The laboratory is open at all times during the day, and the student has access to his working place at any leisure time for such work, or for any other laboratory work that he may desire to carry out. At the Phipps Institute laboratory facilities are provided for the students working there.

OTHER EXTRAMURAL TEACHING.—The roster is arranged so that the students of the Third-year and Fourth-year Classes are free to attend the medical clinics at the Pennsylvania and Philadelphia Hospitals on Saturdays. Other medical clinics may also be attended by the members of the same classes, and volunteer work in connec-

tion with various other hospitals is easily secured, particularly during vacation.

CLINICO-PATHOLOGICAL DEMONSTRATIONS.—All autopsies held at the University Hospital will be attended by the students on duty in the ward in which the case under examination occurred. The assistant pathologist of the hospital conducts the autopsy, the clinicians in charge of the case first explaining the clinical aspects of the condition.

DIETETICS OF THE SICK. *Dr. B. Franklin Stahl.*—One lecture a week during the last half of the year is given, with the purpose of providing the students an understanding of foods and their composition and preparation, and demonstrations are given of the methods of preparing various foods suitable for different individuals, the demonstrations being made sufficiently elementary to be readily comprehended and remembered, and to illustrate the influence of cooking upon the food selected. The dietetic treatment of the various diseases is later taken up. The diet in disease is illustrated by showing trays of food prepared for patients suffering from diseases under consideration, and thus practical lessons are provided exhibiting the variety of diet that may be secured from a limited number of food materials.

NUMBER OF HOURS DEVOTED BY EACH STUDENT TO MEDICINE.

<i>Second Year.</i>		Hours
Lectures on Physical Diagnosis.....	16	
Practical Work in Physical Diagnosis.....	48	
<i>Third Year.</i>		
Systematic Course in Medicine.....	64	
Systematic Therapeutic Clinics.....	32	
Observation Classes	24	
Ward Classes	96	
Clinical Laboratory Course.....	56	
<i>Fourth Year.</i>		
Systematic Medical Clinics.....	128	
Clinical Conferences	96	
Ward Classes	42	
Ward Work	170	
Lectures on Dietics of the Sick.....	16	
Total	788	

SURGERY.

EDWARD MARTIN, M. D.,	<i>John Rhea Barton Professor of Surgery.</i>
CHARLES H. FRAZIER, M. D., }	<i>Professors of Clinical Surgery.</i>
JOHN B. DEAVER, M. D., LL. D., . }	
HENRY K. PANCOAST, M. D.,	<i>Professor of Roentgenology.</i>
ALFRED C. WOOD, M. D.,	<i>Assistant Professor of Surgery.</i>
J. EDWIN SWEET, M. D.,	<i>Assistant Professor of Experimental Surgery.</i>
RICHARD H. HARTE, M. D.,	<i>Adjunct Professors of Surgery.</i>
JAMES P. HUTCHINSON, M. D.,... }	
JOHN B. CARNETT, M. D.,	<i>Associates in Surgery.</i>
JOHN H. JOPSON, M. D.,	
GEORGE P. MÜLLER, M. D.,	
T. TURNER THOMAS, M. D., }	
JOHN SPEESE, M. D.,	
BENJAMIN A. THOMAS, M. D.,... }	<i>Instructors in Surgery.</i>
GEORGE G. ROSS, M. D.,	
ALBERT D. WHITING, M. D.,	
DAMON B. PFEIFFER, M. D.,	
GEORGE D. MORTON, M. D., }	<i>Assistant Instructors in Surgery.</i>
JOHN BUSCH, M. D.,	
CHARLES F. MITCHELL, M. D.,... }	
ELDRIDGE L. ELIASON, M. D., ... }	
KARL SCHÄFFLE, M. D.,	
GEORGE M. LAWS, M. D.,	

SURGICAL PATHOLOGY.—In charge of *Drs. G. P. Müller, John Speese, Karl Schäffle and Damon B. Pfeiffer.*

The course in Surgery extends over a period of two years (the third and fourth years), and is conducted by the Professor of Surgery, two Professors of Clinical Surgery, an Assistant Professor, two Adjunct Professors, and a corps of clinical instructors. The course, which includes instruction in surgical pathology, in the principles and practice of surgery, in practical minor surgery and in operative surgery, is so arranged that every student shall have received at its termination systematic instruction in every subject.

The methods are varied, and are designed to give the student thorough training in the fundamental principles concerning the pathogenesis of all surgical affections; to develop his powers of observation; to make him thoroughly conversant with the principles underlying every plan of treatment; and, as far as possible, to give him opportunity under the direction of instructors to put in prac-

tice certain minor and major operative procedures. They include (1) Demonstrations in Surgical Pathology; (2) Systematic Lectures; (3) Surgical Clinics; (4) Surgical Ward Classes; (5) Clinical Conferences in Surgery; (6) Courses in Practical Minor Surgery, including Bandaging, Fracture Dressing, and Dispensary Work; (7) Operative Surgery; (8) General Reviews; (9) Ward Work and Visits; and (10) Experimental Surgery.

I. SURGICAL PATHOLOGY. *Dr. Müller.*—Once a week throughout the year, a lecture and demonstration to the Third-year Class. The projection of lantern slides and microscopic sections upon the screen, and demonstrations of fresh specimens from the surgical clinic and from the museum, serve to illustrate the lectures.

Dr. Speese.—Demonstrations of charts, gross specimens and microscopic specimens, to each member of the class, one and one-half hours a week. This course is supplemental to Dr. Müller's lectures, and aims to present specimens illustrative of the principal surgical diseases. The following subjects are among those demonstrated: repair of wounds, suppuration, abscess, gangrene, ulcer, fistula, sinus; diseases of the thyroid, salivary and mammary glands; repair after fracture, diseases of bones, joints, ligaments, bursæ; diseases of the digestive tract, including the lip, tongue, stomach, gall bladder, liver, pancreas, intestine, appendix and rectum; diseases of the kidney, ureter, bladder, prostate, penis, scrotum and testicle; tumors about the jaw, connective tissue tumors, epithelial skin tumors; diseases of the lymphatic system.

II. SYSTEMATIC LECTURES. *Professor Martin.*—Two systematic lectures a week to the Third and Fourth-year Classes, outlining the etiology, symptomatology, diagnosis and treatment of the more important surgical conditions.

III. SURGICAL CLINICS. *Professor Martin.*—One surgical clinic a week is given to the Third and Fourth-year Classes.

Professor Deaver: Two surgical clinics a week to the Fourth-year Class in the University and in the German Hospitals.

Professor Frazier: One surgical clinic a week to the Fourth-year Class.

Drs. Wood, Carnett and Müller: One surgical clinic a week to the Third-year Class.

IV. SURGICAL WARD CLASSES.—Each student attends three ward classes a week throughout the session. The student personally examines cases, expresses his views as to the diagnosis and treatment, performs certain minor operations, assists in operations, and is given opportunity to administer anesthetics, with the assistance of an instructor.

Professor Martin: One hour a week at the University Hospital.

Dr. Wood: One hour a week at the University or Philadelphia Hospital.

Dr. Harte or Dr. Hutchinson: One hour a week at the Pennsylvania Hospital.

Drs. Carnett and Thomas.—Alternately, one hour a week at the Philadelphia Hospital.

V. SURGICAL DIAGNOSIS. *Professor Martin.*—One hour a week to the Third-year Class.

VI. PRACTICAL MINOR SURGERY. *Dr. Wood and assistants.*—One hour a week throughout the year. This course, for which the class is divided into sections, is given in the Hospital and the Surgical Out-Patient Department. The course is chiefly practical, and includes the following exercises: application of dressings to minor surgical cases, cerebral localization, application of heat and cold, hemostasis, application of plaster-of-Paris and adhesive dressings, catheterization, irrigation, intravenous injection, hypodermoclysis, local anesthesia, the preparation and care of patients, and the after-treatment. In addition to the course in the Out-Patient Department, a systematic course is given in bandaging to the Second-year Class (four and one-half hours a week for a period of seven weeks) and to the Third-year Class in fracture dressings (one hour a week for a period of ten weeks).

VII. OPERATIVE SURGERY. *Dr. Jopson and assistants.*—In this course the class is first taught systematically the principles and the general methods of operations; and subsequently each student performs, or assists in the performance, of the major operations upon the cadaver (*a*) upon the extremities (ligations, amputations, disarticulations and excisions); (*b*) upon the abdominal cavity (appendectomy, intestinal anastomosis, herniotomy); operations upon the gall bladder; (*c*) upon the head (trephining); (*d*) and upon the neck (tracheotomy and intubation).

VIII. SURGICAL REVIEW. Periodically throughout the year both the Third and Fourth-year Classes are examined upon the subjects in which they have received instruction.

IX. WARD WORK. One-third of the class is assigned to duty in the University Hospital, another third in the Philadelphia Hospital, for a third of the year. This gives to each student ward work during two-thirds of the year. The work is arranged as follows: The student reports at the ward at 10 A. M., and is occupied for two hours daily, excepting Saturday and Sunday. From 10 to 11 A. M., he examines the cases assigned to him, each member of the group having a certain number of cases under his sole care. All physical and clin-

ical examinations are made under the guidance of the resident physician.

At 11 A. M., one of the two sections in the surgical wards goes to the operating room where *the Students* participate in the operations of the day, serving as assistant, etherizer, recorder or critic. The student is thus brought in close contact with the operation upon the case which he has had an opportunity to examine before. He will also have an opportunity to follow it up in his ward work. The other section remains in the surgical wards and makes rounds accompanied by one of the surgeons or assistant surgeons. The student in charge of each case reports on the progress of each case and upon his examinations, and criticisms and explanations are made by the instructor. In some instances the students are taken to the dressing room and instructed in the methods and technique of surgical dressings.

X. EXPERIMENTAL SURGERY. *Dr. Sweet.*—The elective course in experimental surgery is open to a limited number of those men of the third year class, who by inclination and personal qualities demonstrate an especial fitness for the practice of surgery. The object of the course is to give these qualified men opportunity to practice the fundamental principles of Surgery in work upon definite surgical problems.

NUMBER OF HOURS DEVOTED BY EACH STUDENT TO SURGERY.

	Hours.
Surgical Pathology	80
Systematic Lectures	128
Surgical Clinics	160
Surgical Ward Classes	82
Minor Surgery	32
Operative Surgery	14
Practical Surgery and Surgical Diagnosis	42
Ward Work	52
Total	590

ORTHOPEDIC SURGERY.

G. G. DAVIS, M. D., M. R. C. S., Eng., *Professor of Orthopedic Surgery.*

JAMES K. YOUNG, M. D., *Associate Professor of Orthopedic Surgery.*

WALTER G. ELMER, M. D., } *Instructors in Orthopedic Surgery.*
 THOS. A. O'HARA, M. D., }
 ROBERT L. GRAY, M. D., }

The instruction in Orthopedic Surgery is confined to the fourth year.

I. CLINICAL INSTRUCTION.—Clinical instruction is given one hour a week from October 1 to February 1. This course includes the surgical and mechanical treatment of congenital malformations, deficiencies and deformities; also of acquired distortions and deformities the result of disease or injury, joint diseases, rickets, infantile spinal and cerebral paralysis, etc., etc.

II. WARD CLASS WORK. *Drs. Elmer, O'Hara and Gray.*—For ward teaching, the Fourth-year Class is divided into small sections, which meet once a week. Cases in the wards and dispensary are employed to perfect each student in personal diagnosis and treatment. Instruction is also given in the application of apparatus, plaster-of-Paris and corrective dressings; the construction of braces; the treatment of lateral curvature, paralysis, etc. Each student is expected personally to perform all the necessary manipulations.

A specially equipped orthopedic gymnasium connected with this department is in daily use for demonstrating methods for the correction of deformities and the development of muscular power.

III. WORK IN OUT-PATIENT DEPARTMENT. Dispensary work is continued daily throughout the year. Students desiring special practical work can arrange for certain periods in the Dispensary.

GYNECOLOGY.

JOHN G. CLARK, M. D.,	<i>Professor of Gynecology.</i>
HENRY D. BEYEA, M. D.,	} <i>Associates in Gynecology.</i>
BROOKE M. ANSPACH, M. D.,	
CHARLES C. NORRIS, M. D.,	} <i>Instructors in Gynecology.</i>
WILLIAM B. SMALL, M. D.,	
FLOYD E. KEENE, M. D.,	

The instruction in Gynecology extends throughout the third and fourth years and comprehends:

THIRD YEAR.

I. RECITATION AND LANTERN DEMONSTRATIONS. One hour a week devoted either to recitations or to lantern demonstrations by Professor Clark. It is intended that the demonstrations shall fully supplement the recitations, thus rendering as clear as possible the histologic, anatomic, and pathologic, as well as the operative side of Gynecology. The third year instruction is entirely theoretic, and is

intended to prepare the student for his practical work of the fourth year.

FOURTH YEAR.

II. CLINICAL WARD CLASSES. *Professor Clark or Dr. Anspach.*—Three times a week. The class is divided into sections, which attend the clinical ward classes. These sections are further subdivided into small groups of students who see all cases with the professor or instructors before any plan of treatment is instituted. The history of the case is carefully reviewed; and, instead of the usual clinical lecture preceding an operation, the special group of students for the day are closely quizzed on all points relative to diagnosis, treatment, and prognosis. Immediately after the operation, all points on the technique of the operation, the post-operative care of the patient, the possible complications, and the ultimate prognosis are fully considered.

III. CLINICAL CONFERENCE.—Once a week. During this Conference the clinical reporters for each ward class give in detail the histories of cases seen during the preceding week, with treatment and results. The instructor merely acts as a guide in these conferences the students carrying the burden of the discussion.

DERMATOLOGY.

L. A. DUHRING, M. D., *Emeritus Professor of Dermatology and Honorary Curator of the Collections in Dermatology.*
 MILTON B. HARTZELL, A. M., M. D.,*Professor of Dermatology.*
 F. C. KNOWLES, M. D.,*Instructor in Dermatology.*

I. LECTURES.—One lecture weekly is given to the members of the entire Fourth-year Class, the subject-matter being descriptive of the commoner diseases of the skin as met with in this country. The lectures are abundantly illustrated by charts, paintings, photographs, wax and papier-mache models. The course begins October 1 and terminates February 1.

II. CLINICS.—Once weekly to the Third-year Class, February 1 to the close of the session. A number of cases are exhibited and commented on in such a manner as to render the clinical features of the disease plain.

III. WARD INSTRUCTION.—Four times weekly to sections of the Fourth-year Class in the wards of the Philadelphia General Hospital and in the Skin Dispensary of the University Hospital, the students thus coming in contact with cases.

OPHTHALMOLOGY.

GEORGE E. DE SCHWEINITZ, M. D.,*Professor of Ophthalmology.*

JOHN T. CARPENTER, M. D.,*Lecturer on Ophthalmology.*

EDWARD A. SHUMWAY, M. D., ..

H. MAXWELL LANGDON, M. D., ..

THOMAS B. HOLLOWAY, M. D., ..

CARL WILLIAMS, M. D.,

Instructors in Ophthalmology.

I. PRACTICAL WORK IN THE PHYSIOLOGICAL LABORATORY. The second-year men are each provided with suitable appliances, an optical box, an ophthalmoscope, an artificial eye, color tests, etc., and are instructed in the rudiments of physiological optics and in the physiology of the eye. This course, which consists of a series of laboratory hours, is conducted by the Professor of Physiology and his assistants.

II. LECTURE DEMONSTRATIONS AND CLINICAL LECTURES. *Professor de Schweinitz.*—These are given twice a week, from the first of October until the first of February, to members of the Third-year Class. The subjects covered in this course comprise the methods of examining the patient and the external examination of the eye; functional testing; diseases and injuries of the eye; the eye in its relation to general diseases; medical ophthalmoscopy and medical ophthalmology; and operative ophthalmology. The clinical lectures in this course continue throughout the academic year. Thirty-five hours are devoted to the entire course.

III. PRACTICAL WORK. *Drs. Carpenter, Shumway, Holloway, Williams and Langdon.*—Daily clinics are given in the Dispensary and in the wards of the Philadelphia Hospital. The students of the Third-year Class are divided into sections of about thirty men, and each of these sections subdivided into smaller sections of ten. Each subsection has the opportunity in turn of closely inspecting the patients with external inflammatory diseases of the eye, of seeing the method of applying the remedies, of making the commoner applications utilized in the treatment, of learning the use of the ophthalmoscope so that each student may recognize the healthy fundus and its important diseased conditions; and of ascertaining the results secured by functional testing, such as the pupillary reflexes, the visual acuity, the field of vision, the balance of the external ocular muscles, and the refractive errors. The number of hours devoted to this course is forty-eight.

IV. The students of the fourth year have the opportunity of electing a continuation of the instruction in Ophthalmology by attendance on the clinical lectures, which continue throughout the academic year, and by work in the Eye Dispensary one hour weekly.

OBSTETRICS.

BARTON COOKE HIRST, M. D.,.....*Professor of Obstetrics.*

RICHARD C. NORRIS, M. D.,*Assistant Professor of Obstetrics.*

JOHN H. GIRVIN, M. D., }

WILLIAM R. NICHOLSON, M. D., .. } *Associates in Obstetrics.*

JOHN C. HIRST, M. D., }

J. H. ALLEN, M. D., }

L. F. LUBURG, M. D., } *Assistant Instructors in Ob-*
stetrics.

E. P. BARNARD, M. D., }

A graduated course of instruction in Obstetrics is given to the members of the Third and Fourth-year Classes in the Maternity Pavilion of the University Hospital, in the New Medical Laboratories and in the Out-Patient Department of the Hospital, conducted under the direct control of the Professor of Obstetrics.

I. CLINICS. *Professor Hirst.*—Two clinical lectures a week are given to the Third-year Class, the large clinical material of the Maternity Department being used to illustrate a systematic course of lectures on the complications of gestation, labor and the puerperium.

II. DEMONSTRATIONS. Demonstrations of palpation, pelvimetry and the signs of pregnancy are given to sections of four students; routine examinations of urine; attendance on labor cases; demonstrations of the injuries of parturition and their repair.

III. CLINICAL AND OPERATIVE OBSTETRICS. *Professor Hirst.*—One clinic a week to the Fourth-year Class, devoted to the surgical treatment of all the complications and pathological consequences of the childbearing act at all periods, is given in the maternity amphitheatre.

IV. WARD WORK. Every morning from 10 to 12 a small section of the class, under the supervision of the interne, study the cases in the wards, and under the direction of an instructor, assist in the repair of injuries of the genital canal, in the closure of abdominal wounds, in the local treatment of genital infections, the final examination of the puerpera, etc.

V. OBSTETRICAL OPERATIONS. *Professor Hirst.*—In the Anna Dike Scott Memorial Amphitheatre an exhibition of all obstetrical operations is given to the members of both the Third and Fourth-year Classes.

VI. PRACTICAL EXERCISES WITH MANIKINS AND FŒTAL BODIES. *Assistant Professor Norris.*—Each student devotes eight hours to the practice upon the manikin of the obstetrical operations.

VII. PRACTICAL EXERCISES IN THE OUT-PATIENT DEPARTMENT. This department is under the direct control of the Professor of

Obstetrics. The total indoor and outdoor service amounts to 2000 cases a year. The complicated cases in this service demanding operative treatment are transported to the University Hospital, and the operations are exhibited to the combined Third and Fourth-year Classes. Each student attends in confinement from six to eight labor cases.

NEUROLOGY.

CHARLES K. MILLS, M. D.,*Professor of Neurology.*

WILLIAM G. SPILLER, M. D.,*Professor of Neuro-pathology and Associate Professor of Neurology.*

JAMES W. McCONNELL, M. D.,*Associate in Neurology.*

ALFRED R. ALLEN, M. D., ..*Lecturer on Neurological Electrotherapeutics and Instructor in Neurology and in Neuro-pathology.*

S. D. LUDLUM, M. D.,*Instructor in Neurology and in Neuro-pathology.*

SAMUEL LEOPOLD, M. D.,*Assistant Instructor in Neurology and Assistant in Neuro-pathology.*

N. S. YAWGER, M. D.,*Assistant Instructor in Neurology.*

WILLIAMS CADWALADER, M. D.,*Assistant Instructor in Neurology. and Assistant in Neuro-pathology.*

EDWARD M. WILLIAMS, M. D.,*Assistant in Neuro-pathology.*

I. CLINICAL LECTURES. *Professors Mills and Spiller.*—One clinical lecture a week is given to the Fourth-year students at the University Hospital throughout the entire year, during the first half of the session by Professor Mills, and during the second half by Professor Spiller.

II. CLINICAL LECTURES (*Continued*). One lecture a week is also given to the Fourth-year Class during the first half of the session at the Philadelphia General Hospital. An effort is made to systematize the teaching, especially at the Philadelphia General Hospital, where the large amount of material always at command enables the teacher to select and arrange beforehand the subjects to be discussed.

III. WARD CLASS INSTRUCTION. *Dr. McConnell, Instructor and Assistant Instructors.*—This instruction is given during one-half of the year, both in the University and in the Philadelphia General Hospital. The class is divided into small sections, so as to give each student the opportunity of personally investigating the cases under the supervision of the instructors.

IV. WARD WORK. Ward work in neurology, similar to that described under instruction in medicine for the fourth year, is given in the University Hospital under the supervision of the professors

and instructors in neurology. This ward work is in addition to the ward classes above described.

V. INSTRUCTION IN OUT-PATIENT DEPARTMENT. *Dr. McConnell, Dr. Allen, Other Instructors and Assistant Instructors.*—In connection with the teaching given in the wards of the University and Philadelphia General Hospitals, advantage is taken of the large outdoor neurological service, sections being instructed in the dispensary at times previously arranged. In this way the students are brought in contact with nervous diseases in their earlier as well as in their later manifestations. The methods of studying, recording and treating cases are taught. Lectures and demonstrations in electrotherapeutics are given by Dr. A. R. Allen, lecturer on neurological electrotherapeutics. The electromedical apparatus used in the outdoor service is of the most modern type, including static, galvanic and faradic instruments. Instruction is given in the use of all the methods now employed in the treatment of diseases of the nervous system.

VI. NEURO-PATHOLOGY. *Professor Spiller, assisted by Drs. Allen, Ludlum and Leopold.*—One hour and a half a week to each member of the Third-year Class, during October and November. The course is open also to post-graduate students. The work is in part clinical. The students are shown various gross pathological specimens, and are taught the signs and symptoms caused by the lesions represented by these specimens. Where considered desirable, the clinical history of the case illustrated is given. The students are by this instruction much better prepared for their fourth-year clinical work in neurology. Microscopical sections illustrating many pathological conditions are demonstrated by the lantern to the entire class one hour each week during December and January, so that the students are enabled to study the more minute morbid changes occurring in diseases of the nervous system. The technique employed in investigation is also taught so far as possible, so as to include the methods of imbedding, cutting, staining, etc., employed in this branch of medicine. The students are in this way prepared to conduct original investigations in the pathology of the nervous system after their graduation, if they so desire. Instruction is also given in the methods of preparation of the brain and cord for gross examination, so that the nervous tissues may not be injured for microscopical study.

MENTAL DISEASES.

CHARLES W. BURR, M. D.,*Professor of Mental Diseases.*

All instruction in Mental Diseases is given in the Philadelphia General Hospital. Throughout the year one hour each week is

given the third year class. The first five lectures are systematic, dealing with the aetiology and general symptomatology of such affections, all the remainder being clinical lectures. In the fourth year each student attends not less than ten ward class periods, in each of which he examines the patient himself, reporting his findings and diagnoses to the professor for criticism. Especially in these latter exercises he obtains an insight into the general workings of asylum management.

PEDIATRICS.

J. P. CROZER GRIFFITH, M. D.,	<i>Clinical Professor of Pediatrics.</i>
THOMPSON S. WESTCOTT, M. D., .	} <i>Associates in Pediatrics.</i>
MAURICE OSTHEIMER, M. D.,	
CHARLES A. FIFE, M. D.,	
HOWARD C. CARPENTER, M. D., ...	} <i>Instructors in Pediatrics.</i>
J. CLAXTON GITTINGS, M. D.,.....	

The course in Pediatrics consists of lectures, ward classes and ward work at the University Hospital and at the Children's Hospital.

The lectures are conducted by the Clinical Professor of Pediatrics in the medical amphitheatre of the University Hospital once a week. Special lectures are given upon the general diagnosis, symptomatology and treatment of disease in children. The more important subjects receive systematic and full discussion, among these being such topics as pneumonia of childhood, gastrointestinal diseases, typhoid fever in infancy and childhood, forms of paralysis, the feeding of infants, etc., etc. In addition to these, the Children's Ward and Dispensary are drawn upon for clinical lectures on the various diseases presenting themselves.

The ward classes are conducted at the University Hospital by Dr. Ostheimer, at the Children's Hospital by Dr. Westcott, and at the Philadelphia Hospital by Drs. Carpenter and Fife. Subsections of the class, consisting of from eight to fifteen students, attend these ward classes three times a week and have the opportunity of examining the patients under the direction of the instructor, and in addition learn the practical management of the diseases of children as conducted in the Hospital wards. The exceptional richness and variety of material afforded by the Children's Hospital make this part of the course a valuable feature. In addition to the work mentioned the students, in small groups, are assigned personal supervision of certain cases in the wards in the University Hospital, making daily observations of them and attending the ward visits of the assistant pediatric physicians, Drs. Ostheimer, Gittings, Fife and Carpenter.

LARYNGOLOGY AND RHINOLOGY.

CHARLES P. GRAYSON, M. D., *Clinical Professor of Laryngology and Rhinology.*

WALTER S. HARGETT, M. D., }
P. S. STOUT, M. D., } *Instructors in Laryngology.*
D. N. HUSIK, M. D., *Assistant Instructor in Laryngology.*

I. LECTURES AND CLINICS. *Professor Grayson.*—From January to May there is a course of weekly lectures given to the Third-year Class, covering the anatomy and physiology of the upper air and digestive tracts, these being illustrated by drawings and by dry and wet preparations. The diseases of the nose and its accessory cavities, of the pharynx, the fauces and the larynx, are systematically studied; and in connection with their causation and treatment, emphasis is laid upon the pathologic and therapeutic importance of the systemic conditions with which they are often associated. The surgery of these special regions is also thoroughly demonstrated during the course by a series of clinics.

II. PRACTICAL WORK IN OUT-PATIENT DEPARTMENT. *Professor Grayson and assistants.*—Throughout equal periods of the session the Fourth-year Class attends this course, divided into sections of such size that each student receives an abundance of practical work under the personal supervision of Dr. Grayson and his assistants. The very large service of this dispensary provides ample material for the members of the class to acquire proficiency in the use of the various instruments of examination and treatment, and to become expert in the diagnosis and treatment of the diseases that are more often encountered in general practice.

OTOLOGY.

B. ALEXANDER RANDALL, M. D., *Clinical Professor of Otology.*

RALPH BUTLER, M. D., *Instructor in Otology.*

BENJAMIN D. PARISH, M. D., *Assistant Instructor in Otology.*

I. LECTURES. *Professor Randall.*—The instruction in the second half of the third year consists of a course of lectures, partly clinical, but with abundant illustrations by anatomical and pathological preparations, models, charts and the stereopticon. Operations for diseases of the mastoid and lateral sinus and abscess of the brain are demonstrated on the cadaver, if not upon patients.

II. PRACTICAL WORK. *Professor Randall and Dr. Butler.*—Practical work is given to the Fourth-year Class in subsections of ten or less, in the newly equipped Out-Patient Department or wards of the University Hospital. Individual instruction is given by the dispensary staff in the examination, recording and treatment of patients, the work being delegated to the students so far as they

may show themselves competent. All are thus drilled in the use of the head-mirror, in rhinoscopy and Eustachian catheterization, as well as in simpler measures. In mastoid and other operations selected students assist or operate under strict supervision, and follow the cases in the later dressings. Stress is laid throughout upon simplicity in the essential methods of diagnosis and treatment, with minute and conscientious care in application.

GENITO-URINARY DISEASES.

THOMAS R. NEILSON, M. D., *Clinical Professor of Genito-Urinary Diseases.*

E. HOLLINGSWORTH SITER, M. D., . *Instructor in Genito-Urinary Diseases.*

ALEXANDER A. UHLE, M. D., *Assistant Instructor in Genito-Urinary Diseases.*

W. H. MACKINNEY, M. D., *Assistant Instructor in Genito-Urinary Diseases.*

JOHN LAIRD, M. D., *Assistant Instructor in Genito-Urinary Diseases.*

Instruction in Genito-Urinary Diseases is given in the fourth year.

WARD CLASSES. *Professor Neilson and Drs. Siter and Uhle.*—Ward classes, for which the class is divided into sections, are held three times a week throughout the year in the Out-Patient Department. The students are afforded excellent opportunity to become familiar with the methods of diagnosis and treatment of diseases of the genito-urinary apparatus by personal observation, and by practical work under the guidance of the teachers. House cases requiring operation are operated on by the professor before the class.

ELECTIVES.

FOURTH-YEAR CLASS.—A member of the Fourth-year Class may, with the approval of the professor in charge, inscribe his name for special instruction in any of the clinical branches taught in the school, provided he gives at least one hour a week, for a period of not more than one-half of the academic year, to the work. He may inscribe his name likewise for special work in the fundamental branches, provided, in the opinion of the professor in charge of the department, he be qualified to undertake it, and has at his disposal the time necessary to its successful performance.

THIRD-YEAR CLASS.—A member of the Third-year Class will be privileged to take special work in the fundamental branches on the same conditions as offered to the members of the Fourth-year Class in these branches.

Students contemplating the election of special work in addition to the regular scheduled work of the fourth and third years are expected to observe the following regulations:

(a) The number of electives selected may depend upon the number of hours at the disposal of the student, and the absence of all conflict with the work scheduled on the general roster.

(b) The qualifications on the part of the student for the pursuit of any given subject shall be decided by the professor in charge of the department.

(c) The decision as to the time necessary or desirable to give to the special subject shall rest with the professor in charge.

(d) The practicability of affording special opportunities in any subject or subjects to any or all students electing them will be decided by the professors in charge of the departments.

(e) Consent to enter upon special work must be obtained from the professor in charge in the form of a permit on special blanks prepared for the purpose, to be presented at the office of the Dean before entering upon the work specified.

(f) The right is reserved to the professor of the department to terminate at any time the special privileges of a student for lack of qualifications to pursue profitably the work undertaken, or for irregularity in attendance.

(g) No examination will be held or mark given, for elective work done under these conditions.

**FIRST-YEAR CLASS, 1911-1912,
ORDER OF INSTRUCTION, DAILY, BEFORE FEB. 1.**

<i>Hour.</i>	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>	<i>Saturday.</i>
9 A. M.	CORNELL. Osteology	TAYLOR. Physiological Chemistry.	TAYLOR. Physiological Chemistry.	TAYLOR. Physiological Chemistry.	ABBOTT. Bacteriology.	Laboratory of Histology and Embryology.
10 A. M.	Laboratory of Physiological Chemistry.	Laboratory of Physiological Chemistry.	Laboratory of Physiological Chemistry.	Laboratory of Physiological Chemistry.	Laboratory of Histology and Embryology.	
11 A. M.						
12 M.						
1 P. M.						
2 P. M.	Osteology and Dissection.	Osteology and Dissection.	Osteology and Dissection.	Osteology and Dissection.	Osteology and Dissection.	
3 P. M.						
4 P. M.	PIERSOL. Anatomy.	PIERSOL. Anatomy.	PIERSOL. Anatomy.	TAYLOR. Physiological Chemistry.	TAYLOR. Physiological Chemistry.	
5 P. M.		Gymnasium.			Gymnasium.	

For the first period of 42 working days the class will work in the period from 1.30 to 4 P. M., in the Osteological Laboratory on Monday, Tuesday, Wednesday, Thursday and Friday; thereafter at the same periods in the Dissecting Room.

FIRST-YEAR CLASS, 1911-1912

ORDER OF INSTRUCTION, DAILY, AFTER FEB. 1.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A. M.						
10 A. M.	Bacteriological Laboratory.	Bacteriological Laboratory.	Laboratory of Histology and Embryology.	Bacteriological Laboratory.	Bacteriological Laboratory.	Laboratory of Histology and Embryology.
11 A. M.						
12 M.						
1 P. M.						
2 P. M.	Dissection.	Dissection.	Dissection.	Dissection.	Dissection.	
3 P. M.						
4 P. M.	PIERSOL. Anatomy.	PIERSOL. Anatomy.	PIERSOL. Anatomy.	Emergency Treatment.	Medical Terminology.	
5 P. M.			Gymnasium.		Gymnasium.	

SECOND-YEAR CLASS, 1911-1912.

ORDER OF INSTRUCTION, DAILY, BEFORE FEB. 1.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A. M.						
10 A. M.	Physiological Laboratory.	Pathological Laboratory.	Physiological Laboratory.	Physiological Laboratory.	Pathological Laboratory.	Pathological Laboratory.
11 A. M.	PEARCE. Pathology.	PEARCE. Pathology.	PEARCE. Pathology.	Pharmacological Conference. Section A.	Pharmacological Conference. Section B.	
12 M.						
1 P. M.						
2 P. M.	First working period, Dissection of Head.	First working period, Dissection of Head.	First working period, Dissection of Head.	First working period, Dissection of Head.	First working period, Dissection of Head.	
3 P. M.	Second working period, Pharmacological Laboratory; Sect. A.	Second working period, Pharmacological Laboratory; Sect. B.	Second working period, Pharmacological Laboratory; Sect. A.	Second working period, Pharmacological Laboratory; Sect. B.	Second working period, Pharmacology.	
4 P. M.	REICHERT Physiology.	REICHERT. Physiology.	RICHARDS. Pharmacology.	REICHERT. Physiology.	REICHERT. Physiology.	
5 P. M.	Gymnasium.		Gymnasium.			

The class is divided into two sections, A and B, for work in the laboratory of Pharmacology and in the Pharmacological Conferences; in other laboratories the entire class is accommodated at each period scheduled.

SECOND YEAR CLASS, 1911-1912.

ORDER OF INSTRUCTION, DAILY, **AFTER** FEB. 1.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A. M.						
10 A. M.	Physiological Laboratory.	Pathological Laboratory.	Physiological Laboratory.	Physiological Laboratory.	Pathological Laboratory.	Pathological Laboratory.
11 A. M.						
12 M.	PEARCE. Pathology.	PEARCE. Pathology.	PEARCE. Pathology.	Pharmacological Conference. Section A.	Pharmacological Conference. Section B.	
1 P. M.						
2 P. M.	Pharmacological Laboratory. Physical Diagnosis. Sections.	2.30 Applied Anatomy.	Pharmacological Laboratory. Physical Diagnosis. Sections.	2.00 LONGCOPE. Physical Diagnosis. RICHARDS. Pharmacology.	2.30 Applied Anatomy.	
3 P. M.						
4 P. M.	REICHERT. Physiology.	REICHERT. Physiology.	RICHARDS. Pharmacology.	REICHERT. Physiology.	REICHERT. Physiology.	
5 P. M.	Gymnasium.		Gymnasium.			

SECOND-YEAR CLASS.

SPECIAL ROSTER FOR PRACTICAL WORK.

AFTER FEBRUARY 1ST.

The class is divided into two sections, A and B, for work in the Laboratory of Pharmacology, in Pharmacological Conferences, and in Practical Physical Diagnosis.

	Mon.	Tues.	Wed.	Thur.	Fri.
Laboratory of Pharmacology, (1.30 to 4 P. M.)	A	—	B	—	—
Pharmacological Conferences, (11.30 to 12.30)	—	—	—	A	B
Physical Diagnosis, (1.30 to 4 P. M.)	B	—	A	—	—

ORDER OF INSTRUCTION, DAILY.—THIRD YEAR.—1910-1911.

HR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9	Dem. in Neuro Pathology (Oct. and Nov.) Pharmacol. Laboratory (before Feb. 1.) Pract. Therapeutics (after Feb. 1.) Dem. in Gross Pathology.	Burr. Mental Diseases	Dem. in Neuro Pathology. (Oct. and Nov.) Pharmacol. Laboratory. (before Feb. 1.) Pract. Therapeutics. (after Feb. 1.) Dem. in Gross Pathology.	Dem. in Neuro Pathology (Oct. and Nov.) Pharmacol. Laboratory (before Feb. 1.) Pract. Therapeutics (after Feb. 1.) Dem. in Gross Pathology.	Edsall. Clin. Therapeutics.	Davis. Applied Anatomy.
10		Karsner. Pathology.			Richards. Pharmacology to Feb. 1. g	Clinic. Philadelphia or Pennsylvania Hospital.
11	Applied Anatomy. Pepper. Clinical Laboratory (after Feb. 1.) Dem. in Surg. Pathology.	Richards. Pharmacology to Feb. 1.	Applied Anatomy. Pepper. Clinical Laboratory (after Feb. 1.) Dem. in Surg. Pathology.	Applied Anatomy. Pepper. Clinical Laboratory (after Feb. 1.) Dem. in Surg. Pathology.	Clinical Surgery.	Clinic. Philadelphia or Pennsylvania Hospital.
12	A. C. Wood. Pract. Dressing and Pract. Minor Surgery.	Spiller. (before Feb. 1.) Dermatology (after Feb. 1.)	Martin. Surg. Diagnosis.	Müller. Surg. Pathology	Ward Class in Surgery.	Richards. Pharmacology to Feb. 1.
1	Ward Class in Surgery.	Martin. Surgery.	Martin Surgical Clinic.	Ward Class in Surgery.	Martin. Surgery.	Surgical Clinic.
2					Fussell. Med. Observ.	
3	Ward Class in Medicine. Ward Class in Ophthal. Medical Ward Class.	Ward Class in Medicine. Ward Class in Ophthal. Medical Ward Class.	de Schweinitz. Ophthalmology (before Feb. 1.) Grayson. Laryngology (after Feb. 1.)	Ward Class in Medicine. Ward Class in Ophthal. Medical Ward Class.	de Schweinitz. Ophthalmic Clinic (before Feb. 1.) Randall. Orology (after Feb. 1.)	
4	Kelly. Medicine	Hirst. Obstetrics.	Clark. Lantern Dem. in Gynecology.	Kelly. Medicine.	Hirst. Obstetrics.	
5					Pepper. Clin. Lab. (after Feb. 1.)	

SESSION 1910-1911.

Schedule of Practical Instruction for Third-Year Class.

For practical instruction in all subjects the class is divided into three sections (A, B and C), each of which is subdivided into four subsections (as A¹, A², A³, A⁴) for Ward Classes in Medicine. Demonstrations in Neuro-Pathology and Gross Pathology and Pharmacology, 9 to 10.30 A. M.; Applied Anatomy and Surgical Pathology, 10.30 A. M. to 12 M.; Surgical Ward Classes, 1 to 2 P. M. Monday and Thursday, 12 to 1 Friday; Medical Observation, 1 to 2 P. M.; Ward Classes in Medicine and Ophthalmology, 3 to 4 P. M.

Subject.	Mon.	Tue.	Wed.	Thur.	Fri.	Period.
Neuro-Pathology	B	—	C	A	—	First period of 57 working days, from Oct. 3 to Dec. 10 inclusive.
Gross Pathology	C	—	A	B	—	
Pharmacology	A	—	B	C	—	
Applied Anatomy	B	—	C	A	—	
Surgical Pathology	C	—	A	B	—	
Surgical Ward Class	A&B	—	—	A	B&C	
Medical Observation	—	—	—	C	—	
Medical Ward Class	C	A	—	B	—	
Medical Ward Class	A	B	—	C	—	
Ophthalmological Ward Class.	B	C	—	A	—	
Neuro-Pathology	C	—	A	B	—	Second period of 57 working days, from Dec. 12 to Feb. 25 inclusive.
Gross Pathology	A	—	B	C	—	
Pharmacology	B	—	C	A	—	
Practical Therapeutics	B	—	C	A	—	
Applied Anatomy	C	—	A	B	—	
Surgical Pathology	A	—	B	C	—	
Surgical Ward Class	B&C	—	—	B	A&C	
Medical Observation	—	—	—	A	—	
Medical Ward Class	A	B	—	C	—	
Medical Ward Class	B	C	—	A	—	
Ophthalmological Ward Class.	C	A	—	B	—	
Gross Pathology	B	—	C	A	—	Third period of 58 working days, from Feb. 27 to May 13 inclusive.
Practical Therapeutics	C	—	A	B	—	
Applied Anatomy	A	—	B	C	—	
Surgical Pathology	B	—	C	A	—	
Surgical Ward Class	A&C	—	—	C	A&B	
Medical Observation	—	—	—	B	—	
Medical Ward Class	B	C	—	A	—	
Medical Ward Class	C	A	—	B	—	

SUBSECTIONS OF WARD CLASS IN MEDICINE.

3 P. M.

Oct. 3 to Dec. 10.				Dec. 12 to Feb. 25.				Feb. 27 to April 1.				April 3 to May 13.			
Mon.	Tues.	Thur.		Mon.	Tues.	Thur.		Mon.	Tues.	Thur.		Mon.	Tues.	Thur.	
DR. TORREY..	A ¹	B ¹	C ¹	B ²	C ²	A ²		C ³	A ³	B ³		C ⁴	A ⁴	B ⁴	
DR. GOODMAN	A ²	B ²	C ²	B ³	C ³	A ³		C ⁴	A ⁴	B ⁴		C ¹	A ¹	B ¹	
DR. PIERSOL..	A ³	B ³	C ³	B ⁴	C ⁴	A ⁴		C ¹	A ¹	B ¹		C ²	A ²	B ²	
DR. KLAER ..	A ⁴	B ⁴	C ⁴	B ¹	C ¹	A ¹		C ²	A ²	B ²		C ³	A ³	B ³	
DR. STEVENS.	C ¹	A ¹	B ¹	A ²	B ²	C ²		B ³	C ³	A ³		B ⁴	C ⁴	A ⁴	
DR. ALLEN...	C ²	A ²	B ²	A ³	B ³	C ³		B ⁴	C ⁴	A ⁴		B ¹	C ¹	A ¹	
DR. NORRIS..	C ³	A ³	B ³	A ⁴	B ⁴	C ⁴		B ¹	C ¹	A ¹		B ²	C ²	A ²	
DR. TURNBULL	C ⁴	A ⁴	B ⁴	A ¹	B ¹	C ¹		B ²	C ²	A ²		B ³	C ³	A ³	

Note: For Schedule of Surgical Dispensary (12 to 1 daily) see Bulletin Board.

*Clinico-Pathological Demonstrations. All autopsies at the University Hospital will be made at 11 A. M. Students on duty in the wards will attend with their clinical instructors, who will cooperate with the Pathologist in a combined demonstration.

Session 1910-1911.

SCHEDULE OF PRACTICAL INSTRUCTION.

Fourth-Year Class.

For practical instruction in all subjects the class is divided into three sections, each of which is divided into subsections and each student is given a number, as 1, 2, etc. Students assigned to instruction in Operative Surgery, to attendance at the Southeastern Dispensary or at the Municipal Hospital, are excused from other work scheduled for the same hours.

Hour	Subject	MONDAY			TUESDAY			WEDNESDAY			THURSDAY			FRIDAY		
		Oct. 3 to Dec. 10	Dec. 12 to Feb. 25	Feb. 27 to May 13	Oct. 3 to Dec. 10	Dec. 12 to Feb. 25	Feb. 27 to May 13	Oct. 3 to Dec. 10	Dec. 12 to Feb. 25	Feb. 27 to May 13	Oct. 3 to Dec. 10	Dec. 12 to Feb. 25	Feb. 27 to May 13	Oct. 3 to Dec. 10	Dec. 12 to Feb. 25	Feb. 27 to May 13
1-2 Mon. 1-2 Tue. 12-1 Fri.	Medicine Surgery Genito-Urinary	51-100 101-150	101-150 1-50	1-50 51-100							1-50 51-100 101-150	51-100 101-150 1-50	101-150 1-50 51-100	101-150 1-50 51-100	1-50 51-100 101-150	51-100 101-150 1-50
		Oct. 3 to Nov. 19	Nov. 21 to Jan. 21	Jan. 23 to Mar. 18	Oct. 3 to Nov. 19	Nov. 21 to Jan. 21	Jan. 23 to Mar. 18	Oct. 3 to Nov. 19	Nov. 21 to Jan. 21	Jan. 23 to Mar. 18	Oct. 3 to Nov. 19	Nov. 21 to Jan. 21	Jan. 23 to Mar. 18	Oct. 3 to Nov. 19	Nov. 21 to Jan. 21	Jan. 23 to Mar. 18
	Neurology	1-50	1-50	1-50				51-100	51-100					101-150	101-150	
	Elective							101-113	114-125	126-138	139-150					
	Laryngology	51-63	64-75	76-88	89-100			111-125	126-138	139-150	101-113			1-13	14-25	26-38
	Otology	64-75	76-88	89-100	51-63			126-138	101-113	101-125	114-138			1-13	14-25	26-38
3-4	Pediatrics	76-100	51-63	51-75	64-88			139-150						26-38	39-50	1-13
	Orthopedics	126-138	139-150	101-113	114-125			26-38	39-50	1-13	14-25			76-88	89-100	51-63
	Medicine	139-150	126-138	111-125	101-113			39-50	26-38	1-13	14-25			89-100	76-88	64-75
4.15 to 5.45	Clin. Conf. in Med.	101-125	101-125	126-150	126-150			1-25	1-25	26-50	26-50			51-75	51-75	76-100
5-6	Obstetrics															

WARD WORK.

No. Men.	Medical Wards, University Hospital.	Phipps Institute, Tuesdays, 10-12. Tuberculosis Wards, Philadelphia Hospital.	Surgical Wards, University Hospital. Fridays, 10.30-12.30. Pennsylvania Hospital.	Medical Wards, Philadelphia Hospital.	Specialties (see Subsection Schedule).
1-25	Oct. 3 to Nov. 5	Nov. 7 to Dec. 10	Feb. 27 to April 1	April 3 to May 13	Dec. 12 to Feb. 25
26-50	Nov. 7 to Dec. 10	Oct. 3 to Nov. 5	April 3 to May 13	Feb. 27 to April 1	Dec. 12 to Feb. 25
51-75	Dec. 12 to Jan. 21	Jan. 23 to Feb. 25	Oct. 3 to Nov. 5	Nov. 7 to Dec. 10	Feb. 27 to May 13
76-100	Jan. 23 to Feb. 25	Dec. 12 to Jan. 21	Nov. 7 to Dec. 10	Oct. 3 to Nov. 5	Feb. 27 to May 13
101-125	Feb. 27 to April 1	April 3 to May 13	Dec. 12 to Jan. 21	Jan. 23 to Feb. 25	Oct. 3 to Dec. 10
126-150	April 3 to May 13	Feb. 27 to April 1	Jan. 23 to Feb. 25	Dec. 12 to Jan. 21	Oct. 3 to Dec. 10

SPECIALTIES.

Monday	Tuesday	Wednesday	Thursday	Friday
CLARK 9-11	FRAZIER 9-10	CLARK 9-10.30	CLARK 9-10	CLARK 9-11
11-12 Subsections (see Schedule)	10-12 Subsections (see Schedule)	HIRST 10.30-12	10-12 Subsections (see Schedule)	11-12 Subsections (see Schedule)

SUBSECTIONS OF WARD CLASS IN MEDICINE.—3 P. M.

	Oct. 3 to Nov. 19			Nov. 21 to Jan. 21			Jan. 23 to Mar. 18			Mar. 20 to May 13		
	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.
DR. SAUER	101-113	1-13	51-63	114-125	14-25	64-75	126-138	26-38	76-88	139-150	39-50	89-100
DR. RIESMAN	114-125	14-25	64-75	101-113	1-13	51-63	139-150	39-50	89-100	126-138	26-38	76-88

SUBSECTION SCHEDULE FOR SPECIALTIES, 1910-1911.

First Period, October 3 to December 10

Subject	Oct. 3 to Oct. 22	Oct. 24 to Nov. 5	Nov. 7 to Nov. 19	Nov. 21 to Dec. 10
Obstetrics	101-113	111-125	139-150	126-138
Pediatrics	114-125	101-113	126-138	139-150
Dermatology (Philadelphia Hospital)	126-138	139-150	101-113	111-125
Venereal (Philadelphia Hospital)	139-150	126-138	114-125	101-113

Second Period, December 12 to February 25

Subject	Dec. 12 to Jan. 7	Jan. 9 to Jan. 21	Jan. 23 to Feb. 4	Feb. 6 to Feb. 25
Obstetrics	1-12	13-25	39-50	26-38
Pediatrics	13-25	1-12	26-38	39-50
Dermatology (Philadelphia Hospital)	26-38	39-50	1-12	13-25
Venereal (Philadelphia Hospital)	39-50	26-38	13-25	1-12

Third Period, February 27 to May 13

Subjects	Feb. 27 to Mar. 18	Mar. 20 to Apr. 8	Apr. 10 to Apr. 29	May 1 to May 13
Obstetrics	51-62	63-75	89-100	76-88
Pediatrics	63-75	51-62	76-88	89-100
Dermatology (Philadelphia Hospital)	76-88	89-100	51-62	63-75
Venereal (Philadelphia Hospital)	89-100	76-88	63-75	51-62

SUBSECTIONS OF WARD CLASS IN NEUROLOGY.—3 P. M.

	Oct. 3 to Nov. 5			Nov. 7 to Dec. 10			Dec. 12 to Jan. 21		
	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.
DR. ALLEN, UNIVERSITY HOSPITAL	1-16	51-66	101-116	17-33	67-83	117-133	34-50	84-100	134-150
DR. MCCONNELL, PHILADELPHIA HOSPITAL	17-33	67-83	117-133	34-50	84-100	134-150	1-16	51-66	101-116
DR. LUDLUM, PHILADELPHIA HOSPITAL	34-50	84-100	134-150	1-16	51-66	101-116	17-33	67-83	117-133

SUBSECTIONS OF WARD CLASS IN PEDIATRICS.—3 P. M.

	Oct. 3 to Oct. 22			Oct. 24 to Nov. 5			Nov. 7 to Nov. 19			Nov. 21 to Dec. 10			Dec. 12 to Jan. 7			Jan. 9 to Jan. 21			Jan. 23 to Feb. 4			Feb. 6 to Feb. 25			Feb. 27 to Mar. 18			Mar. 20 to Apr. 8			Apr. 10 to Apr. 29			May 1 to May 13		
	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.	Mon.	Wed.	Fri.
CHILDREN'S HOSPITAL	89-100	126-138	39-50	126-138	26-38	76-88	76-88	139-150	26-38	51-63	139-150	1-13	139-150	39-50	89-100	101-113	89-100	64-75	101-113	14-25	51-63	114-125	1-13	101-113	1-13	51-63	76-88	114-125	26-38	64-75	126-138	14-25	114-125	14-25	61-75	
UNIVERSITY HOSPITAL	126-138	26-38	76-88	76-88	139-150	26-38	76-88	139-150	26-38	89-100	126-138	39-50	139-150	29-50	89-100	89-100	101-113	1-13	51-63	139-150	39-50	101-113	1-13	51-63	114-125	1-13	51-63	114-125	14-25	61-75	111-125	26-38	61-75	126-138	14-25	
PHILADELPHIA HOSPITAL	76-88	139-150	26-38	89-100	126-138	39-50	126-138	26-38	76-88	89-100	101-113	39-50	51-63	139-150	89-100	139-150	39-50	1-13	51-63	114-125	1-13	101-113	1-13	51-63	64-75	101-113	14-25	64-75	126-138	14-25	114-125	11-25	64-75	76-88	111-125	26-38

ORDER OF INSTRUCTION, DAILY.—FOURTH YEAR.—1910-1911.

HR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9	Ward Work	FRAZIER. Clinical Surgery.	Ward Work.	Ward Work.	Ward Work.	ABBOTT. Hygiene.
10	CLARK. Service in Wards and Dispensaries. Gynecology.	Service in Wards and Dispensaries.	CLARK. Service in Wards and Dispensaries. Gynecology.	Service in Wards and Dispensaries.	CLARK. Service in Wards and Dispensaries. Gynecology.	<i>Clinic.</i> Philadelphia or Pennsylvania Hospital.
11*						<i>Clinic.</i> Philadelphia or Pennsylvania Hospital.
12	STENGEL. Clinical Medicine.	WILLARD. Orthopedic Clinic (before Feb. 1). STAHL. Dietetics of the Sick (after Feb. 1).	HIRST. Operative and Clinical Obstetrics.	MUSSER. Clinical Medicine.	Ward Classes. Surgical, Genito-Urinary.	GRIFFITH. Pediatric Clinic.
1	Ward Classes. Surgical, Genito-Urinary.	MARTIN. Surgery.	MARTIN. Surgical Clinic.	Ward Classes. Surgical, Genito-Urinary.	MARTIN. Surgery.	BURR. Mental Diseases (after Feb. 1).
3	Ward Classes. See Schedule of Practical Instruction.	MILLS, SPILLER. Neurologic Clinic.	Ward Classes. See Schedule of Practical Instruction.		Ward Classes. See Schedule of Practical Instruction.	
4	MILLS, SPILLER. Neurology (to Feb. 1).	EDSALL. Clinical Medicine, 4.15 to 5.45.	MUSSER, STENGEL. 4.15-5.45 Clinical Conference in Medicine.	Dermatology (to Feb. 1).	MUSSER, STENGEL. 4.15-5.45 Clinical Conference in Medicine.	
5	MCCARTHY. Medical Jurisprudence (before Feb. 1).			Obstetrics. Operative.		
				DEAVER. Surgical Clinic, German Hospital.		

*Clinico-Pathological Demonstrations. All autopsies at the University Hospital will be made at 11 A. M. Students on duty in the wards will attend with their clinical instructors, who will cooperate with the Pathologist in a combined demonstration.

TEXT-BOOKS

Text-Books

Collateral Reading

Anatomy: Piersol's Text-book of Anatomy; Piersol's Normal Histology; Cunningham's Practical Anatomy.

Cunningham; Gray; Morris; Spalteholz; Sobotta's Histology (edited by Huber); Heisler's Embryology; McMurrich's Embryology.

Bacteriology: Abbott's Principles of Bacteriology; Flügge's Die Mikro-organismen; Günther's Einführung in das Studium der Bakteriologie; Hiss and Bacteriology; Park's Patho-teriology; Harris' edition of Muir and Ritchie's Manual of Zinsser's Text-book of Bacteriogenic Bacteria and Protozoa; Lehman and Neumann's Atlas of Bacteriology.

Enzymes and their Application; Effront; Prescott; Frankland's Micro-organisms in Water; Baumgarten's Pathologische Mykologie; Slater and Spitta's Atlas of Bacteriology; McFarland's Pathogenic Bacteria; Rickett's Infection, Immunity and Serum Therapy.

Physiology: Howell's, Stewart's, Starling's, or Tigerstedt's Physiology; Krehl's Pathologische Physiologie, or the translation by Hewlett, Krehl's Clinical Pathology.

American Text-book of Physiology; Schäfer's Text-book of Physiology.

Pathology: For general use, Stengel's Text-book of Pathology or Adami's General and Special Pathology; McFarland's Text-book of Pathology; Beattie and Dickson.

Thoma's General Pathology; Ziegler's General and Special Pathological Anatomy; Orth's Lehrbuch der speciellen pathologischen Anatomie; Ribbert's Pathologische Histologie; Orth's Diagnostik.

Medicine: Tyson's Text-book of Medicine; Musser's Medical Diagnosis.

Osler's Text-book of Medicine; Osler's Modern Medicine; Albutt and Rolleston, System of Medicine; Grayson's Diseases of Throat, Nose and Ear.

Text-Books

Collateral Reading

Surgery: An American Text-book of Surgery.

White and Martin's Genito-Urinary Surgery; Davis on Bandaging; Willard's Surgery of Childhood; Young's Orthopedic Surgery; Martin's Surgical Diagnosis.

Obstetrics: Hirst's Text-book of Obstetrics.

Norris' American Text-book of Obstetrics; Edgar's Obstetrics; Webster's Obstetrics; Williams' Obstetrics.

Pharmacology: Cushny (required), Wood, Sollmann
Dixon, Schmiedeberg, Meyer
and Gottlieb.

Applied Anatomy: Davis' Applied Anatomy; Thomas' Sylabus.

Woolsey; Eisendrath; Taylor; Treves; Campbell; Deaver.

Physical Diagnosis: Tyson.

Nervous Diseases: Pott's Nervous and Mental Diseases.

Mill's Diseases of the Brain and Cranial Nerves, with a General Introduction on the Study and Treatment of Nervous Diseases; Oppenheim's Diseases of the Nervous System, translated by E. E. Mayer; Dana's Text-book of Nervous Diseases; Church and Peterson's Nervous and Mental Diseases; Starr's Nervous Diseases, Organic and Functional.

Gynecology: Penrose's Text-book of Diseases of Women; Winter's Gynecological Diagnosis.

Kelly's Operative Gynecology; Hirst's Text-book of Gynecology; Ashton's Practice of Gynecology; Montgomery's Text-book of Gynecology.

Text-Books

Collateral Reading

Pediatrics: Holt; Rotch; Koplik; Carr.

Medical Jurisprudence:

Reese's Medical Jurisprudence; Herold's Legal Medicine. The Law in its Relation to Physicians, by Taylor; Draper's Medical Jurisprudence.

Dermatology: Duhring's Cutaneous Medicine, Parts I and II; Stelwagon's Treatise; MacLeod's Handbook of the Pathology of the Skin.

Ophthalmology: de Schweinitz, American Text-book of Diseases of the Eye, Ear, Nose and Throat, by de Schweinitz and Randall.

Hygiene: Bergey's Principles of Hygiene; Sedgwick's Hygiene and the Public Health; Flüge's Grundriss der Hygiene; Notter's Treatise on Hygiene; Abbott's Hygiene of Transmissible Diseases. Syke's Public Health Problems; Bashore's Rural Hygiene; Waring's Modern Methods of Sewage Disposal; Mason's Water Supply, Merriman's Elements of Sanitary Engineering; Rosenau's Disinfection and Disinfectants; Wiley's Foods and their Adulterations; McKenzie's Exercise in Education and Medicine.

Medical Dictionary: Gould or Dorland's Medical Dictionaries.

PART IV

GRADUATE WORK

GRADUATE WORK.

In addition to the usual accommodations afforded graduates of this and other regular medical schools to attend the laboratory and clinical work and sections of the school, two special provisions for post-graduate work leading to degrees are open to applicants, viz.: a course of instruction in Public Health leading to the degree of C. S. (Certified Sanitarian), and, under the rules of the Graduate School of the University of Pennsylvania, the election of certain branches in the School of Medicine in courses leading to the Ph. D. degree.

In addition, the special courses in Tropical Medicine are intended especially for post-graduates, and a limited number of post-graduate students may be accommodated in the work of the Phipps Institute.

1.—COURSES IN PUBLIC HEALTH.

ALEXANDER C. ABBOTT, M. D., Sc. D., Pepper Professor of Hygiene and Bacteriology and Director of the Laboratory of Hygiene.

WILLIAM EASBY, JR., C. E., Professor of Municipal Engineering.

R. TAIT MCKENZIE, A. B., M. D., Professor of Physical Education and Director of the Department of Physical Education.

DAVID H. BERGEY, A. M., M. D., Assistant Professor of Bacteriology.

THOMAS NOLAN, PH. B., M. S., A. M., Assistant Professor of Architecture.

PHILIP P. CALVERT, PH. D., Assistant Professor of Zoölogy.

NATHANIEL GILDERSLEEVE, M. D., Associate in Bacteriology.

LOUIS A. KLEIN, V. M. D., Professor of Pharmacology and Veterinary Hygiene and Dean of the Veterinary School.

M. H. JACOBS, PH. D., Instructor in Zoölogy.

WALTER S. CORNELL, B. S. M. D., Demonstrator, University of Pennsylvania, Medical Inspector, Bureau of Health, Philadelphia.

Sanitary Engineering.—Including a consideration of Hydro-mechanics; Water Supplies; Sewerage and sewage disposal, and the designing of Hydraulic works.

Sanitary Engineering of Buildings.—Including the principles and practices involved in their heating and ventilation; the various methods of draining and plumbing.

Inspection of Meat, Milk and Other Animal Products.—Comprehending a discussion of the general question of meat inspection, of the diseases of food-producing animals dangerous to man; of milk, particularly of the proper methods of production, preservation and delivering; and of the approved methods for the preservation of all such products.

Practical Methods Used in Sanitary Work; i. e., the practical application of chemical, physical and biological methods to the study of the air, water, soil, food, raiment; the methods for the disposal of refuse; the characteristics of offensive and dangerous trades.

Practical Bacteriology.—Covering the use of apparatus, the methods of cultivating and isolating bacteria; the study of special types of bacteria, particularly those concerned in the causation of disease; a study of disinfectants and methods of practical disinfection; the bacteriological analysis of air, water, soil, foods, etc.

Protozoölogy.—This course includes a general introduction to the structure, physiology, life-histories and classification of the protozoa, with especial reference to those forms which cause disease in man and the lower animals. Attention is paid to the technique of protozoan investigation, the special methods of cultivating, fixing, staining and sectioning the protozoa being considered. An attempt is made in the lectures to point out the most promising fields for future investigation, and facilities are offered (in the laboratory) to those desiring them, to pursue original lines of research.

Entomology.—Characters and structures of the arthropods and their subdivisions, with special attention to those forms of arachnids and of insects which as parasites or otherwise attack man and mammals and which do, or may serve as carriers of disease, or which possess poisonous secretions.

Medical Inspection of Schools.—This instruction is given in a brief course of lectures on the subject of medical inspection of school children, and the segregation and care of the mentally deficient pupils found in the schools.

Personal Hygiene.—Covering the topics of anthropometry, the use of exercise for correction of defects; the value of exercise in the maintenance of physiological equilibrium.

Vital Statistics.—Statistical methods and the results, with special reference to the population of cities.

Sanitary Legislation.—Comprising a study of the Federal, State and Municipal laws and regulations for safeguarding the public health.

General Hygiene.—Designed to co-ordinate the foregoing topics and to indicate the relation of each and all to the general question of preventive medicine.

This course covers one academic year.

At the termination of the course both theoretical and practical examinations will be held and to all demonstrating fitness, a diploma, designating the holder as "Certified Sanitarian," will be awarded.

Only persons holding the degree of Doctor of Medicine are eligible to the full course and entitled to apply for the diploma. The fee for the course, including the diploma, is \$150.00. For circular of full particulars apply to the

Director of the Laboratory of Hygiene,
University of Pennsylvania.

2.—COURSES IN THE GRADUATE SCHOOL OF THE UNIVERSITY OF PENNSYLVANIA.

Certain branches of instruction in the Medical School have been incorporated in the Graduate School of the University by the Trustees, and may be elected in appropriate groups by eligible individuals for work for the Master's Degree, or that of Ph. D. The possession of a Baccalaureate Degree is required for admission, and the conditions are subject to the rules of the Graduate School of the University of Pennsylvania. For information address Dean of Graduate School of University of Pennsylvania, Philadelphia.

Majors—Anatomy; Physiology; Physiological Chemistry;
Bacteriology; Pathology; Comparative Pathology.

Professor PIERSOL.

1. Anatomy. Taken as a major only by individuals with satisfactory preparation in Human Anatomy or General Anatomy, and offered only for research work upon such anatomical subjects as may be assigned by the Professor of Anatomy after consultation with each student. Hours to be assigned in each case.

General Human Anatomy may be taken as a minor by students approved by the Professor of Anatomy. Hours for lecture and dissection exercises to follow the class work scheduled for the students of the School of Medicine.

Special portions of Human Anatomy as may harmonize with other branches of study (as in the anatomy of the nervous system for students of psychology) may be selected as minors. Hours of instruction to follow the schedule for such subjects in the School of Medicine.

Professor REICHERT.

2. Physiology. Taken as a major only by individuals with satisfactory preparation and offered only for research work upon such physiological topics as may be assigned by the Professor of Physiology after consultation with each student. Hours to be assigned in each case.

Taken as a minor only by students with approved preparation, in appropriate arrangement with other selected branches. Hours of lecture and laboratory exercises as scheduled in the School of Medicine.

Professor TAYLOR.

3. Physiological Chemistry. Taken as a major only by students with approved preparation in General Chemistry and elementary Physiological Chemistry, and offered only for research study upon such topics as may be assigned by the Professor of Physiological Chemistry after consultation with the individual student. Hours to be assigned in each case.

Taken as a minor only by students with approved preparation in General Chemistry, in appropriate arrangement with other selected branches. Hours of lecture and laboratory exercises as scheduled in the School of Medicine.

Professor ABBOTT.

4. Bacteriology. Taken as a major only by students approved by the Professor of Hygiene and Bacteriology for work in General Bacteriology or for work with the pathogenic organisms. Hours of instruction and laboratory work assigned by the Professor in charge for each individual accepted.

Taken as a minor in connection with other appropriate subjects selected. Hours of instruction and laboratory exercise as scheduled in the School of Medicine.

Professor R. M. PEARCE.

5. Pathology. General Pathology or special divisions of appropriate dignity may be selected as major subjects only by students with approved preparation; the work in any subject

to be conducted with the instruction in the School of Medicine as a basis and advancing into individual research in topics assigned by the Professor of Pathology after consultation with the individual student. Hours of instruction and laboratory work assigned in each case.

As a minor any branch of Pathology may be selected by students with approved preparation, to follow the schedule of lecture and laboratory instruction employed in the School of Medicine.

Professor C. W. BURR.

6. Mental Diseases. This course may be taken as a minor by approved students, the work following the scheduled class-work in the school of medicine. Additional opportunities for diagnosis and observation in the wards of the Insane Department of the Philadelphia Hospital may be granted to special individuals.

Professor W. G. SPILLER.

7. Neuropathology. This course likewise may be elected as a minor, the classwork following the scheduled class hours of the School of Medicine.

Professor ALLEN J. SMITH.

8. Comparative Pathology. General pathology or special divisions of appropriate dignity may be selected as major subjects by students with approved preparation; the work in all cases to be assigned by the professor in charge, as well as the hours of instruction and laboratory work. Appropriate distinction as to the extent of work and required hours will be made when the subject is undertaken as a minor.

3.—COURSES IN TROPICAL MEDICINE.

Professor A. C. ABBOTT, *Bacteriology, Medical Climatology and Geography, Hygiene of the Tropics and of Ships.*

Dr. M. H. JACOBS, *Protozoölogy.*

Dr. P. P. CALVERT, *Entomology.*

Professor ALLEN J. SMITH, *Helminthology and General Medical Zoölogy, and Pathology; Director of the Courses.*

Dr. WILLIAM PEPPER, *Tropical Medicine.*

Professor G. E. DE SCHWEINITZ, *Ophthalmology.*

Professor M. B. HARTZELL, *Dermatology.*

Dr. G. P. MÜLLER, *Surgical Applications.*

DAMASO RIVAS, M. D., PH. D., *Assistant Director of Laboratory.*

The University of Pennsylvania in organizing courses of instruction in Tropical Medicine has had in mind not only the need for special opportunity in these lines for practitioners of medicine in the semi-tropical surroundings of our Southern States and outlying territories, but in view of the rapid extension of American commerce into tropical regions realizes the existing and increasing need for medical men with suitable preparation in the extending spheres of American influence in tropical America and the far East. The comparatively large number of students from Central and South America also has appealed to the authorities as a reason for an attempt to more fully deal with the conditions which such a class of students is certain to meet in their homes when engaged in practice.

For these reasons a course of instruction, which it is hoped will eventually develop into the fullest realization of the desires of the University authorities, has been organized. The fundamental features are particularly dwelt upon as the really essential parts of such a special course of instruction. Philadelphia is not so situated geographically and not possessed of such commercial relations that there may be predicted at all times such number and type of clinical subjects as must be desirable for the full illustration of the various affections to be dealt with; yet there are available, now in one, now in another hospital of the city, which has permitted the University to make use of the material for teaching purposes, a very fair number of cases of the more common and important affections dealt with, exclusive of those which by law are not permitted entrance to the city from the ship-quarantine guarding the port. In all other divisions of the course than the exhibi-

tion of clinical cases it is hoped that ultimate development will leave little to be seriously criticised and much in all of the different lines of instruction which will be found commendable.

It has been determined to offer a course of study extending over a period of fifteen weeks and embracing not less than ten units of work,* at the completion of which period a certificate of attendance is granted, signed by the Provost and Vice-Provost of the University and by the Dean of the Medical School and the Director of the Courses in Tropical Medicine, to all those matriculates who have been in full attendance and who satisfactorily pass examinations in the various branches scheduled for the Courses in Tropical Medicine. To such persons as may have elected individual branches in the course and who satisfy similar requirements for the branch or branches attended, a certificate will be granted for the subject or subjects completed, signed by the Director of the Courses in Tropical Medicine and by the Instructor in the subject in question.

These courses are open to any reputable graduate in Medicine and to students of Medicine who may elect them. The requisite ten units for the certificate may be divided by medical students throughout their period of Medical study, the order of selection to be prescribed by the Dean of the School of Medicine and the Director of the Courses in Tropical Medicine in consultation with the student.

The fee for the full course is \$150.00.

Graduates or students in course are admitted at half rate. Fee for individual branches will be given upon application; but will be based upon the rule of not less than \$15 for a unit in lecture work and \$25 for a unit of laboratory and clinical work.

For the first period, beginning October 1, 1910, and continuing fifteen weeks (exclusive of the Christmas Holidays) the following branches were offered, each with indication of its unit value and allotment of lecture and practicum time.

*A unit is constituted by at least two hours of lecture or recitation work each week for the period of fifteen weeks; or by not less than four hours each week of laboratory work, ward work or clinical lectures.

SUBJECT.	No. of Units Allotted	No. Hrs. Systematic Lectures	No. Hrs. Clin. Lect. of Lab. Wk.	LECTURER.
Med. Climatology and Geog. . . . }	0.5	15	—	Abbott
Hygiene of Tropics and of Ships, . . }				
Tropical Medicine . .	2.0	30	60	Pepper
Skin Diseases of Tropics.	0.5	8	15	Hartzell
Eye Diseases of Tropics	0.5	7	15	deSchweinitz
Protozoölogy	1.0	15	30	Jacobs
Arthropodology. . .	1.0	15	30	Calvert
Helminthology and Gen. Med. Zoölogy	1.0	15	30	Smith
Path. of Tropical Diseases.	2.0	30	60	Smith
Bacteriology of Tropical Diseases .	1.0	—	60	Abbott
Surgery of Tropical Diseases.	0.5	7	15	

For further information address, Director of Courses in Tropical Medicine, School of Medicine, University of Pennsylvania.

4.—THE DEPARTMENT OF RESEARCH MEDICINE.

RICHARD M. PEARCE, M. D.,*Professor of Research Medicine.*

ARTHUR B. EISENBREY, M. D.,*Associate in Research Medicine.*

This department, established in 1910 by specific endowment, has for its object the investigation of problems in clinical medicine by means of the fundamental medical sciences. It is being equipped in such a way that the methods of chemistry, physiology, pathology, bacteriology and pharmacology may be applied to any clinical problem, with special provisions for distinctly experimental investigation, as well as for observation on patients in the wards of the University Hospital. Opportunity for investigation will be given to instructors in other departments of the Medical School and to properly prepared practitioners and students. Although essentially a research department, the department will give a limited amount of undergraduate instruction in special subjects.

5.—HENRY PHIPPS INSTITUTE.

The Henry Phipps Institute for the Study, Prevention and Treatment of Tuberculosis is intended for the threefold object of research in tuberculosis, of instruction, and as a benefaction to the needy afflicted by tuberculosis. Its research and other activities are in charge of a special directorate (v. p. 95); and under appropriate regulations graduate work in its special lines of operation is afforded properly prepared students of this disease. Its possibilities will be decidedly augmented after the completion of the new building intended for it and now in course of erection. Laboratory facilities, clinical opportunities and study and practice in sociology among the tuberculous are offered. Information may be had by addressing either the Dean of the School of Medicine or the Superintending Director of Phipps Institute.

6.—WILLIAM PEPPER LABORATORY OF CLINICAL MEDICINE.

Under appropriate regulations and under approval of the Director of the Laboratory, the facilities of this department (v. p. 93) are extended to graduate students.

PART V

EQUIPMENT AND FACILITIES.

BUILDINGS AND EQUIPMENT.

LOGAN HALL.

Logan Hall contains the Lecture Rooms, the Laboratories of Histology and Embryology and of Osteology, and the Anatomical Study Museums.

The HISTOLOGICAL LABORATORY is under the supervision of the Professor of Anatomy and the Demonstrator of Histology. The Laboratory is furnished with excellent microscopes, and all apparatus necessary to enable the student to become practically familiar with the most approved methods of microscopical technology, as well as with the normal histology of all the tissues and organs. Special facilities are afforded for original research and work in Practical Embryology; for this purpose the Laboratory is open throughout the year except during July and August.

The OSTEOLOGICAL LABORATORY is under the supervision of the Professor of Anatomy and Demonstrator of Osteology. In this Laboratory, the first-year student is required to make himself familiar with the skeleton and the articulations as a part of his instruction in practical anatomy.

LABORATORIES OF PATHOLOGY, PHYSIOLOGY AND PHARMACOLOGY.

The new LABORATORIES OF PATHOLOGY, PHYSIOLOGY, and PHARMACOLOGY, were formally opened June, 1904. This building is unsurpassed in facilities and equipment for graduate and undergraduate work. The building is two stories in height, above a high basement, and measures 340 feet front by nearly 200 feet in depth. The long front faces north, securing a maximum amount of light for laboratory purposes. All along the front are arranged small rooms for research, rooms for professors and their assistants, libraries, etc., these opening into a private corridor so that those employed in these rooms may be free from interruption by persons passing through the main halls. Perfect lighting of all the laboratories has been obtained through the front or through large courts, which separate the two main parallel groups of rooms.

The first floor of the building is devoted to physiology and pharmacology and to the laboratories of research medicine. The portion assigned to the first consists of laboratories for practical instruction, for general research work, for subsection teaching, rooms for the professor and assistants, etc. The section for pharmacology consists of a large general laboratory for teaching practical pharmacology, rooms for original research, a commodious museum, etc. An equivalent portion of the southern part of this floor is given over to the laboratories of research medicine. The

second floor is devoted mainly to pathology, the entire north front being given over to laboratories for advanced students in pathology and pathological bacteriology and to the special research and assistants' rooms. The wings accommodate the laboratory of experimental pathology, the museum, the demonstration-rooms and the laboratory of comparative pathology and tropical medicine. The front of the Laboratory of General Pathological Histology consists almost entirely of glass and looks north into a spacious court. Another section of this floor, also looking into the court, is subdivided into smaller laboratories for instruction in neuropathology and surgical pathology.

Besides numerous laboratories, research-rooms, etc., there are four lecture-rooms in the building, two of these being demonstration rooms with a seating capacity of 185; the others being lecture-rooms with a seating capacity of 400. The building is entirely fireproof, of the most modern construction, supplied with power, electric light, and many kinds of accessories for promoting the teaching and research work.

LABORATORIES OF CHEMISTRY AND ANATOMY.

The CHEMICAL LABORATORIES occupy the first, second and third floors of the Robert Hare Laboratory building; on the second floor is the Laboratory of General Chemistry, and on the third floor that of Physiological Chemistry. In addition to the main rooms, there are smaller rooms, provided with an adequate number of balances for quantitative work, and special rooms set apart for research.

The ANATOMICAL LABORATORY is at the top of the building and is 140 feet in length by 40 feet in width. It is lighted by windows on all sides, and by skylights. The most perfect ventilation is thus secured. There are numerous washstands, with hot and cold water, and private closets for the use of each student. Cleanliness is rigidly enforced. The cadavers furnished the dissecting-room are preserved by refrigeration. Dissection is legalized in Pennsylvania.

LABORATORY OF HYGIENE.

ALEXANDER C. ABBOTT, M. D., *Director.*

The LABORATORY OF HYGIENE was the gift of Mr. Henry Charles Lea, and the equipment was provided through the munificence of the late Henry C. Gibson, of Philadelphia. The building is devoted to graduate and undergraduate work in bacteriology and hygiene. The student laboratory is a commodious, well-lighted and heated room, with a seating capacity for eighty-three students. Each student is supplied with an individual microscope, and with such apparatus as is necessary to conduct elementary studies in Bacteriology.

NEW CLINICAL LABORATORY.

NEW CLINICAL LABORATORY.—Several years ago an extension was made to the University Hospital to accommodate the medical dispensaries, medical amphitheatre and clinical conference room, and on the top floor two large laboratories for the teaching of clinical pathology and for the routine laboratory investigation of the hospital cases. The large room is equipped with desks for the use of the fourth year students, giving accommodations for 150 men. Each student of the fourth year class is assigned a desk and is supplied with an outfit including all the ordinary apparatus required in the examination of blood, urine, stomach contents and other secretions or excretions. He is required to supply himself with a microscope so that he will be enabled to conduct all clinical examinations on cases assigned to him in the hospital wards or elsewhere.

Adjoining the fourth year laboratory is a smaller room equipped in a similar manner and capable of accommodating fifty students each with a working desk. Members of the Third-year Class are here instructed in clinical laboratory methods. The class is divided into three sections, each of which is assigned one day per week throughout the year. The course covers completely the important laboratory methods of investigation of blood, urine, stomach contents, pathological exudates, secretions, excretions, etc.

A third room accommodates the Staff Laboratory, where the Pathological Resident of the hospital, under the direction of an Instructor, carries on all the preliminary examinations of materials sent from the wards, makes all blood examinations, Widal tests, etc. Subsequent examinations are made by students of the Fourth-year Class to whom the cases in the wards are assigned under suitable direction.

WISTAR INSTITUTE OF ANATOMY AND BIOLOGY.

MILTON J. GREENMAN, PH. B., M. D., *Director*.

HENRY H. DONALDSON, PH. D., SC. D., *Professor of Neurology*.

G. CARL HUBER, M. D., *Professor of Embryology*.

SHINKISHI HATAI, PH. D., *Associate in Neurology*.

J. MACPHERSON STOTESBURY, M. D., *Associate in Anatomy*.

HELEN D. KING, PH. D., *Associate in Anatomy*.

WALDEMAR KOCH, PH. D., *Associate in Biological Chemistry*.

EDWARD B. MEIGS, M. D., *Fellow in Physiology*.

The WISTAR INSTITUTE, incorporated in 1892 by the University of Pennsylvania and General Isaac J. Wistar, is the first American University Institute devoted to advanced study and research in anatomy and biology.

Through the munificence of the late General Isaac J. Wistar the Institute was established and endowed not only for the advancement of research in anatomy, but also for the preservation and increase of the anatomical museum originally known as the Wistar or Wistar and Horner Museum. The original museum founded in 1808 by Professor Casper Wistar was used as a teaching museum for students of medicine in the University of Pennsylvania. Its development along broader lines, since the organization of the Institute, has greatly increased its scientific value both to the medical students of the University and to biological students throughout the country. It has now become the depository for research materials which are open, under suitable regulations, to the use of capable investigators from all Institutions, and through its Advisory Board it has established itself as a central anatomical institute.

The Museum is open to the public as well as to students daily, except Sundays and Holidays, from 9 A. M. to 4 P. M., Saturdays from 9 A. M. to 12 M.

Well equipped laboratories and a biological library adjoin the museum and every facility is provided here for the work of investigators. The chief resources of the Institute are, at the present time, directed to researches in Comparative Neurology, Comparative Embryology, Biometry and Biological Chemistry. No undergraduate teaching is done in the Institute, but arrangements can be made with the Professor of Anatomy in the Medical School whereby advanced students or graduates in medicine may be afforded the facilities for research offered by the Wistar Institute.

The Institute publishes the five principal, independent anatomical journals of the United States, namely: *Journal of Morphology*, *The Journal of Comparative Neurology*, *The American Journal of Anatomy*, *The Anatomical Record*, and *The Journal of Experimental Zoölogy*. In these journals appears a large portion of the anatomical research work done in this country.

The museum and laboratory work of the Institute constantly demand the assistance of skillful dissectors, modelers, preparators and draughtsmen. And for this reason unexcelled opportunities are here to be found for a limited number of students desiring to perfect themselves in anatomy or to obtain some income during the college year.

WILLIAM PEPPER CLINICAL LABORATORY.

Associates.

ALFRED STENGEL, M. D., *Director.*

JOHN W. HUNTER, M. D., *Assistant Director.*

SAMUEL S. KNEASS, M. D.,

DANIEL J. MCCARTHY, M. D.,

RALPH S. LAVENSON, M. D.,

THOMAS A. COPE, M. D.

Volunteer Associates.

JOSEPH SAILER, M. D.,	WILLIAM PEPPER, M. D.,
BENJAMIN A. THOMAS, M. D.,	FRED H. KLAER, M. D.,
JOHN C. GITTINGS, M. D.,	JOHN SPEESE, M. D.,
G. P. MÜLLER, M. D.,	G. W. NORRIS, M. D.,
JOHN L. LAIRD, M. D.	

The WILLIAM PEPPER LABORATORY OF CLINICAL MEDICINE, erected through the generosity of the late Dr. William Pepper as a memorial to his father, adjoins the University Hospital. The purposes of the Laboratory are: to promote the interests of the patients by providing facilities for the prosecution of minute clinical studies and original researches; and to advance the interests of science by the publication of the results of such work. No instruction in the Laboratory is given to undergraduates.

The Associates and Volunteer Associates of the Laboratory are appointed for the purpose of carrying out certain lines of investigation for which they have special preparation. The Laboratory does not solicit post-graduate teaching, but has received a limited number of post-graduate students from time to time for the purpose of training them to carry on investigations.

The publications of the Laboratory are issued in the form of contributions, which are the collected reprints of articles issued from the Laboratory and published in various medical journals. One or two numbers, containing from fifteen to twenty or more separate articles, appear each year. A limited number of these may be had by interested persons on application.

THE UNIVERSITY HOSPITAL.

ROBERT E. HASTINGS, <i>Chairman</i>	} <i>Executive Committee of Board of Managers.</i>
GEORGE H. MCFADDEN.....	
JOHN SAILER,	
CHARLES W. DULLES, M. D.,	
HENRY S. GROVE,	
MRS. CHARLES C. HARRISON,	
THOMAS G. ASHTON, M. D.,	<i>Secretary.</i>

The UNIVERSITY HOSPITAL is situated on the University Campus. It is one of the most important agents in the training of the students, an invaluable adjunct to the School of Medicine, and, together with the Out-Patient Department, furnishes ample provision for the teaching of clinical medicine according to the most approved methods. With accommodation for 344 patients, it also affords excellent facilities for bedside instruction. Members of the faculty are members of the Hospital Staff.

Six positions as resident physicians in the University Hospital are awarded annually to six members of the Graduating Class of the School of Medicine, selected from the twenty-five members of the class who have the highest general average at the end of the third year of the course.

The MATERNITY PAVILION, with a capacity of 50 beds, comprises a main building, to which the patients are admitted two weeks before delivery, two wings containing delivery rooms, and the ANNA DIKE SCOTT Amphitheatre. This department is under the charge of the Professor of Obstetrics. Under the supervision of the clinical staff, the students assist in cases of labor and make daily visits, during the puerperium, to the mother and child.

THE HENRY PHIPPS INSTITUTE.

BOARD OF DIRECTORS.

EDGAR F. SMITH, *Pres.*,
Dr. JOHN H. MUSSER,
Dr. ROBERT G. LE CONTE,
Mr. GEORGE E. GORDON,
Dr. CHARLES J. HATFIELD,
Dr. H. R. M. LANDIS,
Dr. PAUL A. LEWIS,
Mr. ALEXANDER M. WILSON.

ADVISORY COUNCIL.

Dr. SAMUEL G. DIXON, *Commissioner of Health of Pennsylvania, ex-officio*,
Dr. JOSEPH S. NEFF, *Director, Department Public Health and Charities, Philadelphia, ex-officio*,
Mr. WILLIAM H. BALDWIN, *Washington*,
Dr. HERMANN M. BIGGS, *New York*,
Dr. LAWRASON BROWN, *Saranac Lake*,
Dr. HENRY BAIRD FAVILL, *Chicago*,
Dr. SIMON FLEXNER, *New York*,
Dr. SAMUEL McCUNE LINDSAY, *New York*,
Dr. JAMES ALEXANDER MILLER, *New York*,
Dr. JOSEPH H. PRATT, *Boston*,
Dr. THEOBALD SMITH, *Boston*,
Dr. WILLIAM H. WELCH, *Baltimore*,
Dr. H. GIDEON WELLS, *Chicago*.

CONSULTING STAFF.

Dr. T. B. HOLLOWAY, *Consulting Ophthalmologist*,
Dr. D. J. MCCARTHY, *Consulting Neurologist*,
Dr. J. B. CARNETT, *Consulting Surgeon*.

STAFF.

Clinical Department.

Dr. H. R. M. LANDIS, *Director*.

Instructors.

Dr. FRANK A. CRAIG,
Dr. JOHN M. CRUCE,
Dr. C. M. MONTGOMERY,
Dr. J. T. ULLOM.

Clinical Assistants.

Dr. ISADORE KAUFMAN,
Dr. J. D. BLACKWOOD,
Dr. J. W. BUSCH,
Dr. MAURICE M. JACOB.

Laryngologists.

Dr. GEORGE FETTEROLF,
Dr. HENRY J. OFF,
Dr. I. W. BROWN.

Pathological Department.

Dr. PAUL A. LEWIS, *Director*,
Miss BERTHA I. BARKER, *Research Assistant*.

Sociological Department.

Mr. ALEXANDER M. WILSON, *Director; Superintending Director of Institute*.

The Henry Phipps Institute for the study, treatment and prevention of tuberculosis was established in 1903 by Mr. Henry Phipps, of New York, at Third and Pine Streets, Philadelphia, in the building now occupied as temporary quarters. The situation was chosen as being in a section of the city in which tuberculosis was most prevalent, and was made possible by a special law permitting the establishment of the Hospital within the city limits.

In February, 1910, Mr. Phipps transferred the Institute to the University of Pennsylvania, having previously engaged to erect an appropriate permanent building for its accommodation upon grounds

gradually acquired with this in view. By this generous gift to the University this becomes the first fully organized and equipped institution of the kind with University connection. The work of the Institute, until the new building is erected at Seventh and Lombard Streets, will be continued in its present quarters; but an entire reorganization of the plan of work has been undertaken by the University. This contemplates a broadening of its efforts and division of the work into three distinct fields of activity, to be represented by three corresponding departments, the Laboratory or Research Department, the Clinical Department and the Sociological Department, each under its special director. An Advisory Council of twelve members has been selected, composed of the most distinguished men of the country in the lines of work carried on by this Institute, who will visit the Institution at least once each year.

On account of its connection with the University, the Institute will offer facilities for study to the students of the University of Pennsylvania, especially those of the Medical School. Both by visits to the Institution and through the publication of the results of its investigations and research, the Institute will prove valuable both to students and physicians throughout the country interested in this special work.

LIBRARY FACILITIES.

The basis of the Medical Section of the University Library is formed by the Stillé Collection, presented by the late Alfred J. Stillé, to which additions have been made from the William Pepper Medical Foundation, established by the late Dr. William Pepper. In addition to purchases, the Medical Section has grown considerably through gifts presented by a number of medical publishers, more particularly Messrs. W. B. Saunders, Lea and Febiger, the J. B. Lippincott Company and P. Blakiston's Son & Co. From most of these are received regularly the new publications issued by them. In addition to these, the University subscribes to about 100 medical periodicals, which represent a choice selection of the leading medical periodicals of this country and Europe. Through special funds the sets of all the more important periodicals and publications of medical societies have been completed.

The PEPPER MEDICAL ALCOVE contains sets of the more important medical periodicals, general reference works covering the various departments of medicine and surgery, text-books, serial publications and all the more important new medical books received at the University.

DEPARTMENTAL LIBRARIES.—A Departmental Library in Physiology has been established, in which are on file all of the important current periodicals on general and special Physiology. Similar Libraries in Pathology and Pharmacology are being organized. These Libraries are accessible to the students under the same rules or regulations as are in effect in the General Library.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—In addition to the Medical Section of the University Library, students have access to the Library of the College of Physicians, the second largest medical library in the United States.

PART VI.



GENERAL INFORMATION.

GENERAL INFORMATION.

ARRANGEMENT OF SESSION.

The academic year consists of one session, beginning on the last Friday in September, and ending at Commencement on the third Wednesday in June.

TUITION FEES AND EXPENSES.

Under no circumstances are any changes made in the established fees. The only free scholarships granted are those under the regulations hereinafter referred to.

It is expected of every student, either before or by the time of entrance to the Second-Year Class, that he will provide for himself, either by purchase, rental or otherwise, a microscope of a grade suitable for general medical work.

First Year.

Matriculation Fee	\$5 00
For General Tuition Ticket, admitting to all the lectures, and including all the laboratory work assigned to this year	\$200 00
Use of Dissecting Material (<i>two parts</i>).....	\$1.50 a part.
Gymnasium and Houston Club Fee.....	\$10 00

Second Year.

For General Tuition Ticket, admitting to all the lectures, and including all the laboratory work assigned to this year.....	\$200 00
Use of Dissecting Material (<i>two parts</i>).....	\$1.50 a part.
Gymnasium and Houston Club Fee.....	\$10 00

Third Year.

For General Tuition Ticket, admitting to all the lectures and practical courses assigned to this year.....	\$200 00
Gymnasium and Houston Club Fee.....	\$10 00

Fourth Year.

For General Tuition Ticket, admitting to all the lectures and the practical courses assigned to this year (no graduation fee).....	\$200 00
Use of Material for operations in Surgery (<i>one part</i>)....	\$1.50 a part.
Gymnasium and Houston Club Fee.....	\$10 00

FEES FOR SPECIAL COURSES OF THE GENERAL CURRICULUM.

(Students taking special or partial courses, if not already matriculated, or if not graduates of the School, are required to pay the matriculation fee in addition to the fees named below.)

For any single Course of Lectures	\$20 00
For Practical Course in the Chemical Laboratory	25 00
For the Course in Practical Gynecology of the PRESIDENT'S OFFICE	25 00
For any one of the remaining Practical Courses	15 00

For practical courses in special classes a minimum fee of \$25.00 will be charged, this fee increasing in proportion to the material required and special attention demanded in instruction.

Graduates in Medicine of this University are admitted to the courses free of charge; but they are required to pay for any laboratory material which they may use.

Fees for Courses in Public Health and in Tropical Medicine.

General Fee for the Course in Public Health, including Diploma	\$150.00
For Single Branch of This Course	25.00
Regular Deposit, to cover breakage, etc., for entire Course, or single branch	10.00
General Fee for Course in Tropical Medicine	\$150.00
Fee for Single Branch of this Course from	\$15.00 upward
Fee for Single Graduate Course in Phipps Institute from	\$50.00 upward

RULES IN RELATION TO FEES.

All payments should be made to W. O. Miller, Bursar, Room 102, College Hall.

A matriculation fee of \$5.00 must be paid by all new students in the department, whether previously registered in another department or not.

Every student shall upon entering the University make a deposit of \$10.00 to cover loss, damage, or breakage of University property, library fines, or any charge not paid by the student in some other way. A student whose deposit is by charges against it reduced to \$2.50 or less shall be required to pay a sum sufficient to restore the deposit to its original amount. No deposit or balance remaining on a deposit shall be finally repaid to a student until he shall have been graduated or shall have formally withdrawn from the University.

A student who repeats the studies of the year will be required to pay the full tuition fee.

ALLOWANCES IN CASE OF WITHDRAWAL, ETC.

A student who leaves the University within thirty days after the beginning of either the first or second term, and who shall have paid the full term's tuition fees may receive a return of one-half of the tuition fees paid, but in no case shall the matriculation fee be returned.

EXAMINATIONS.

First Year.—The mid-year examination in Anatomy (including Osteology, Syndesmology, Myology, and such other subjects as may have been covered by the lectures on Anatomy before February 1), and examination in Physiological Chemistry are held about February 1.

Final examinations at end of year: Anatomy and Bacteriology.

Second Year.—Examinations in Anatomy, in Physiology and Materia Medica will be held about February 1.

Final examinations at the end of the year in Physiology, Applied Anatomy, Pathology, Pharmacology and Physical Diagnosis.

Third Year.—Examination in Ophthalmology will be held about February 1.

Final examinations at end of year: Medicine, Surgery, Obstetrics, Therapeutics and Pathology.

Fourth Year.—Examination in Dermatology will be held about February 1.

Final examinations at end of year: Medicine, Surgery, Obstetrics, Gynecology and Hygiene. The examinations include questions on Diseases of the Ear, Children's Diseases and Neurology, from lists furnished by the Clinical Professors of those branches.

GRADUATION.

At the end of the fourth year a student who has passed all the required examinations satisfactorily will receive the degree of Doctor of Medicine under the following provisions:

1. He must be 21 years of age, and of good moral character.
2. He must have passed satisfactory examinations in all of the required branches of the curriculum, must have attended the practical instruction in all departments, and his last year of instruction must have been at this school.
3. He must have attended at least six cases of Obstetrics.
4. He must be present at Commencement, unless excused by the Dean of the Faculty.

SCHOLARSHIPS.

A competitive examination of candidates to fill three free scholarships is held annually. (In 1911, on Monday, September 25, at 10 A. M., in the New Medical Laboratories).† Each candidate will be required:

† Two vacancies exist in 1911 in the scholarships of the second year class, and will be filled in the same way and at the same time as here outlined for the scholarships offered to entering students.

First. To satisfy the entrance requirements as stated on pages 412-425.

Second. To furnish satisfactory evidence in writing, from three reputable persons, that he is without means to defray the expenses of a medical education.

Third. To write a brief autobiography of about 300 words in length, which will serve as a test of his qualifications in orthography and grammar. This is to be written on Monday, September 25, at 10 A. M.

Fourth. To undergo examinations in the following subjects:*

1. Any two of the four languages:

- (a) Latin (third book of Horace's *Odes*).
- (b) Greek (first four books of the *Iliad*). The examination will include prosody, syntax and Homeric dialect.
- (c) French.—Elementary French, including grammar, prose composition (Joynes' *Minimum French Grammar and Reader*), and reading at sight in the following books:

Francisque Sarcey, *Le Siège de Paris*.

Beaumarchais, *Le Barbier de Séville*.

Anatole France, *Le Crime de Sylvestre Bonnard*.

- (d) German.—Elementary German, including Learned's *German Grammar*, Wesselhoeft's or Harris' *Prose Composition*, and reading at sight in the following books:

Heine's *Harzreise*.

Eichendorff's *Aus dem Leben eines Taugenichts*.

Wildenbruch's *Das edle Blut*.

2. Physics. (As in Gage's *Principles of Physics*—Goodspeed's *Revision*, Crew's *General Physics*, or Duff's *Text-book of Physics*.)

3. Plane Geometry.

Fifth. To pay an examination fee of \$5.00, which is not returned, but is accepted as the matriculation fee in case the candidate is successful.

*A percentage of not less than 50 must be obtained in each one of the subjects in which a competitor undergoes examination, and an average percentage of at least 70 must be obtained on the whole examination that a competitor may have his name placed upon the eligible list. The appointments will be made from this eligible list.

The application of candidates who propose presenting themselves for examination, together with the certificates demanded by the second requirement of the competition, must be in the hands of the Dean *before September 10*. This requirement having been complied with, candidates will appear without further notice at the time stated for examinations.

PRIZES TO BE AWARDED, JUNE, 1911.

NOTE.—*Theses and Reports in competition for Prizes must be resented to the Dean on or before May 1. Prizes will not be awarded unless the work submitted reaches a high standard of excellence.*

THE ALUMNI MEDAL and a prize of \$50.00 is offered by the Society of the Alumni of the School of Medicine of the University, to the member of the Graduating Class who attains the highest general average in examinations. (Only those members of the Graduating Class who have taken the last three years of the course in Medicine at this University are eligible.)

THE DR. SPENCER MORRIS PRIZE.—The annual income, derived from the investment of Ten Thousand Dollars, will be awarded each year to that Medical Student of the Graduating Class who shall pass the best examination for the degree of Doctor of Medicine.

THE FREDERICK A. PACKARD Prize of One Hundred Dollars is offered by a friend of the University to the member of the Graduating Class who has proven himself to be the most proficient in the course in Clinical Medicine.

The Professor of Obstetrics offers a Prize of an obstetrical forceps to the member of the Graduating Class who furnishes the best report of a case of Obstetrics occurring in the University Maternity Hospital.

APPOINTMENTS TO HOSPITALS.

The following graduates of the School of Medicine, Class of 1910, arranged in alphabetical order, were the successful candidates in competitive examinations or appointment for positions as Resident Physicians in the various Hospitals:

UNIVERSITY HOSPITAL:

Clark, I. G.
Cook, J. W.
Keating, P. M.
Landon, L. H.
Lewis, R. M.
Sprowl, F. G.

ST. FRANCIS HOSPITAL, TRENTON, N. J.:

Speer, W. H.
Steckel, H. A.

PHILADELPHIA HOSPITAL:

Beddoe, A. E.
 Brubaker, W. H.
 Dillon, C. A.
 Dorwarth, C. V.
 Eastland, D. L.
 Fewell, A. G.
 Friedmann, O. F.
 Gordon, W. M.
 Heller, J. B., Jr.
 Kimmelman, L.
 Noble, C. G.
 Paine, L.
 Raab, F. H.
 Seidal, V. I.
 Shull, J. R.
 Sumner, R. E.
 Watson, W.
 Wilkes, L. A.
 Woodland, E. E.

GERMAN HOSPITAL:

McKnight, H. A.
 Stewart, L. F.

ST. AGNES HOSPITAL:

Conlon, P. J.
 Quinn, E. L.
 Shull, J. R.
 Wiggins, J. C.
 Wood, P. H.

PENNSYLVANIA HOSPITAL:

Buckenham, J. E. B.
 Carson, J. B.
 Hewson, W.
 Shelley, I. H.

EPISCOPAL HOSPITAL:

Griffith, M. A.
 Aller, T. G., Jr.
 McKnight, H. A.

METHODIST EPISCOPAL HOSPITAL:

Cox, M. W.
 Fewell, A. G.
 Ivey, E. V.
 MacDonald, R. F.

CHILDREN'S SEASHORE HOUSE,
ATLANTIC CITY, N. J.:

Davis, H. B.
 Fawcett, I.
 Holt, E. Z.

MERCER MEMORIAL HOME FOR IN-
VALID WOMEN, ATLANTIC CITY,
N. J.:

Dorwarth, C. V.

MONMOUTH HOSPITAL, LONG
BRANCH, N. J.:

Tilton, W. S.

ST. MARY'S HOSPITAL, HOBOKEN,
N. J.:

Londrigan, J. F.

BRYN MAWR HOSPITAL:

Carson, J. B.

PRESBYTERIAN HOSPITAL:

Cox, M. W.
 Hobbs, W. H.
 Mitchell, A. G.
 Wilson, H. T., Jr.

GERMANTOWN HOSPITAL:

Bowen, C. R.
 McKinsty, G. H.
 Merscher, W.

PITTSBURGH EYE AND EAR HOS-
PITAL, PITTSBURGH, PA.:

Baum, H. L.

ST. FRANCIS HOSPITAL, PITTS-
BURGH, PA.:

Bowen, J. T.
 Cox, M. W.
 Dunn, J. C.

U. S. MARINE HOSPITAL, BALTI-
MORE, MD.

Eastland, D. L.
 McIntosh, W. P., Jr.

CARNEY HOSPITAL, BOSTON,
MASS.:

Bresnahan, J. F.

- ST. TIMOTHY'S HOSPITAL:
 Hewson, W.
 Holt, E. Z.
 Lingo, M. S.
- KANSAS CITY GENERAL HOSPITAL, KANSAS CITY, Mo.:
 Freeman, S.
 Gordon, W. M.
- ST. ALEXIS HOSPITAL, CLEVELAND, OHIO:
 Barton, A. E.
- ST. JOSEPH'S HOSPITAL, PROVIDENCE, R. I.:
 Urbina, J. F.
- HYGEIA HOSPITAL, RICHMOND, VA.:
 Hodges, F. M.
- ST. CHRISTOPHER'S HOSPITAL:
 Forbes, R. S.
 Frantz, J. P.
 Wood, P. H.
- ST. VINCENT'S HOSPITAL:
 Corcoran, M. P.
- ALLEGHENY GENERAL HOSPITAL, PITTSBURGH, PA.:
 Autenreith, W. C.
 Paine, L.
 Shear, L. M.
 Shull, J. R.
- MERCY HOSPITAL, PITTSBURGH, PA.:
 Archer, P. M.
 Munroe, W. E.
 Nichols, S. H.
 Robb, C. A.
 Robinson, C. I.
- WEST PENN HOSPITAL, PITTSBURGH, PA.:
 Cunningham, G. S.
 Freeman, S.
 Raab, F. H.
 Reese, L. J.
 Thompson, L. L.
- WORCESTER STATE HOSPITAL, WORCESTER, MASS.:
 Striegel, J. G.
- MT. SINAI HOSPITAL:
 Friedmann, O. F.
 Kimmelman, L.
 Seidel, V. I.
- HOWARD HOSPITAL:
 Maits, C. B.
 Shultz, C. L.
 Stewart, L. F.
- JEWISH HOSPITAL:
 Friedmann, O. F.
- ST. JOSEPH'S HOSPITAL:
 Corcoran, M. P.
 Frantz, J. P.
 Graff, J. B.
 Gorman, P. J.
 Loftus, W. E.
- EASTON HOSPITAL, EASTON, PA.:
 Goos, H. W.
 Hodges, F. M.
 Klock, G. G.
- READING HOSPITAL, READING, PA.:
 Leinbach, H. M.
- ST. JOSEPH'S HOSPITAL, READING, PA.:
 Smith, J., Jr.
- HAZLETON STATE HOSPITAL, HAZLETON, PA.:
 Roderick, B. D.
- ALTOONA HOSPITAL, ALTOONA, PA.:
 McCarthy, H. L.
 Shultz, C. L.
- STATE HOSPITAL, FOUNTAIN SPRINGS, PA.:
 Deitrick, G. A.
- ST. LUKE'S HOSPITAL, SOUTH BETHLEHEM, PA.:
 Herbst, W. F.

- MERCY HOSPITAL, WILKES-BARRE, PA.:
Reese, W. C.
- PHOENIXVILLE HOSPITAL, PHOENIXVILLE, PA.:
Lotterhos, G.
- WILLIAMSPORT HOSPITAL, WILLIAMSPORT, PA.:
Davis, H. K.
- SOUTH SIDE HOSPITAL, PITTSBURGH, PA.:
Shear, L. M.
- PITTSBURGH HOSPITAL, PITTSBURGH, PA.:
Leigh, H. C.
- McKEESPORT HOSPITAL, McKEESPORT, PA.:
Thompson, L. L.
- ST. JOSEPH'S HOSPITAL, LANCASTER, PA.:
Wenger, J. M.
- LANCASTER GENERAL HOSPITAL, LANCASTER, PA.:
Davis, H. B.
Kirkpatrick, C. A.
- SCRANTON STATE HOSPITAL, SCRANTON, PA.:
Beddoe, A. E.
- CHESTER CO. HOSPITAL, WEST CHESTER, PA.:
Aller, T. G., Jr.
DeFoney, C. G.
- CHESTER HOSPITAL, CHESTER, PA.:
Corcoran, M. P.
DeFoney, C. G.
Horn, H. T.
McSherry, E. F.
- ALLENTOWN HOSPITAL, ALLENTOWN, PA.:
Schneller, J. S.
- DIXMONT HOSPITAL, DIXMONT, PA.:
McKinstry, G. H.
- LOCK HAVEN HOSPITAL, LOCK HAVEN, PA.:
Roethke, R. W.
Welliver, W. E.
- MONTEFIORE HOSPITAL, PITTSBURGH, PA.:
Kimmelman, L.
Reese, W. C.
- BELLEVUE GENERAL HOSPITAL, NEW YORK, N. Y.:
McMurrey, M. W.
Wilson, H. T., Jr.
- NEW YORK POLYCLINIC HOSPITAL, NEW YORK, N. Y.:
Raab, F. H.
Paine, L.
- KINGS COUNTY HOSPITAL, BROOKLYN, N. Y.:
Eastland, D. L.
Kelly, J. E.
Noble, C. G.
- GERMAN HOSPITAL, BROOKLYN, N. Y.:
Neitsch, L.
- ST. CATHERINE'S HOSPITAL, BROOKLYN, N. Y.:
Smith, J., Jr.
- STATEN ISLAND HOSPITAL, STATEN ISLAND, N. Y.:
McIntosh, W. P., Jr.
- ROCHESTER CITY HOSPITAL, ROCHESTER, N. Y.:
Stewart, A. D.
- ARNOT-ODGEN MEMORIAL HOSPITAL, ELMIRA, N. Y.:
Striegel, J. G.

GOOD SHEPHERD HOSPITAL,
SYRACUSE, N. Y.;
Striegel, J. G.

COOPER HOSPITAL, CAMDEN, N. J.:
Shields, E. E.
Town, E. C.

APPOINTMENTS TO HOSPITALS IN PHILADELPHIA.

Name of Hospital.	Total number of residents.	Number of Penna. graduates serving as residents at this date
Philadelphia (Blockley) Hospital.....	30	12
Episcopal Hospital	12	7
German Hospital	9	6
Germantown Hospital	5	3
Howard Hospital	3	3
Jewish Hospital	6	2
Methodist Hospital	7	3
Mt. Sinai Hospital	4	1
Municipal Hospital	6	6
Pennsylvania Hospital	10	6
Presbyterian Hospital	11	6
St. Agnes' Hospital	6	4
St. Christopher's Hospital	1	1
St. Joseph's Hospital	7	5
St. Timothy's Hospital	2	2
Total	119	67

Percentage of appointments received by University of Pennsylvania graduates, 56.3 per cent.

SOCIETY OF THE ALUMNI OF THE SCHOOL OF MEDICINE.

President.—Samuel S. Stryker, '66.

Vice-Presidents.—Dr. George A. Piersol, '77; C. W. Burr, '86; Dr.

George W. Guthrie, '73; Dr. Edward Jackson, '78; W. A.

Edwards, '81; T. M. T. McKennan, '82.

Historian.—Roland G. Curtin, '66.

Secretary and Treasurer.—Edw. A. Shumway, '94,
2007 Chestnut Street, Philadelphia.

Executive Committee (for one year).—Wm. J. Taylor, '82; B. Franklin Stahl, '87; Alex. R. Craig, '93; Wm. Campbell Posey, '89; William Pepper, '97; S. McC. Hamill, '88; Henry R. Geyelin, '09.

Executive Committee (for two years).—Herbert B. Carpenter, '89; J. H. W. Rhein, '90; John G. Clark, '91; C. Y. White, '95; Wm. S. Wadsworth, '97; Charles K. Mills, '69; G. G. Davis, '79.

Executive Committee (for three years).—James Tyson, '63; George E. de Schweinitz, '81; George C. Stout, '91; J. Gurney Taylor, '95; Charles H. Frazier, '92.

This Society was founded in 1870, and is composed of graduates of the School of Medicine in good standing.

The Society is actively engaged in collecting detailed information regarding the Medical Alumni, and is now preparing a matriculate catalogue which will contain the historical data thus acquired. A list of graduates of the Department of Medicine has been published, and can be had on application to the Treasurer at a cost of \$1.50.

A special arrangement has been made with the General Alumni Society whereby *The Alumni Register* has become the official organ of this Society; and a joint annual subscription of \$2 will include membership in both Societies, and one year's subscription to *The Alumni Register*.

Subscriptions should be sent to the Treasurer of the General Alumni Society, 402 Real Estate Trust Building.

THE PHILADELPHIA ALUMNI SOCIETY OF THE SCHOOL OF MEDICINE

President.—L. H. Adler, Jr., '88.

Honorary Vice-President.—Provost Edgar F. Smith.

Vice-Presidents.—J. Guernsey Taylor, '95; Howard A. Sutton, '98; John J. Robrecht, '94.

Recording Secretary.—Wm. S. Wray, '94.

Corresponding Secretary.—B. Franklin Stahl, '89.

Treasurer.—Herbert B. Carpenter, '89.

Executive Committee.—Clarence P. Franklin, '93; Daniel M. Hoyt, '01; George C. Stout, '91; George G. Ross, '91; Harvey E. Schock, '02.

This Society was founded in the spring of 1892, among the alumni of the Medical Department of the University living in and near Philadelphia. The meetings are held on the third Saturday evenings of February, May and November, and are of a purely social character. The membership is composed of graduates of the School of Medicine. Those desiring to become members are requested to send their names to the Secretary. The dues are two dollars per annum.

DEGREES AND PRIZES, 1910.

At a public Commencement, held Wednesday, June 15, 1910, at the American Academy of Music, the degree of Doctor of Medicine was conferred by Charles C. Harrison, A. M., LL. D., Provost, upon the following candidates.

Name.	Post-Office.	State.
Aller, Thomas Gustin, Jr.....	Brooklyn	New York.
Archer, Palmer Marion.....	Houston	Texas.
Autenreith, William Clifford.....	New Brighton ..	Pennsylvania.
Baldi, Frederick Sobernheimer....	Philadelphia	Pennsylvania.
Barton, Amos Ethan.....	Vilas	Pennsylvania.
Baum, Harry Lester.....	Shelbyville	Illinois.
Beddoe, Arthur Eynon	Scranton	Pennsylvania.
Bowen, Clement Remington	Philadelphia	Pennsylvania.
Bowen, John Thomas	Five Points	Alabama.
Bresnahan, John Francis	Philadelphia	Pennsylvania.
Brubaker, Walter Hurst	Lebanon	Pennsylvania.
Buckenham, John Edgar Burnett..	Philadelphia	Pennsylvania.
Carson, John Baker	Philadelphia	Pennsylvania.
Chernausek, Samuel	Hutchinson	Minnesota.
Clark, Ivor Gordon	Zanesville	Ohio.
Conlon, Philip Jerome	Newark	New Jersey.
Cook, Joseph Wright	Pottstown	Pennsylvania.
Corcoran, Michael Patrick	Philadelphia	Pennsylvania.
Cox, Milo Ward	Kane	Pennsylvania.
Crothers, George Frank	Upland	Pennsylvania.
Cunningham, George Smith	Blairsville	Pennsylvania.
Davis, Henry Blaine	Burlington	New Jersey.
Davis, Hugh Karr	Wellsboro	Pennsylvania.
DeFoney, Clinton	Philadelphia	Pennsylvania.
Deitrick, George Albert	Mt. Carmel	Pennsylvania.
Dillon, Charles Aloysius	Butler	Pennsylvania.
Dorwarth, Charles Votteler	Philadelphia	Pennsylvania.
Dunn, James Conger	West Union	Pennsylvania.
Eastland, Doyle Lee	Waco	Texas.
Fawcett, Ivan	Wheeling	West Virginia.
Fewell, Alexander Garrison	Rock Hill	South Carolina.
Forbes, Robert Sabin	Philadelphia	Pennsylvania.
Franksen, Charles Henry	Philadelphia	Pennsylvania.
Frantz, Jacob Paul	Lancaster	Pennsylvania.
Freeman, Stanley	Plymouth	Pennsylvania.
Friedmann, Otto Fleisher	Philadelphia	Pennsylvania.
Gibson, William Curtis	Suffolk	Virginia.
Goos, Harry William	Philadelphia	Pennsylvania.
Gordon, William Murray	Philadelphia	Pennsylvania.
Gorman, Peter Jerome	Inkerman	Pennsylvania.
Graff, James Brown	Worthington	Pennsylvania.
Griffin, Clyde Oden	Rocky Mount ...	North Carolina.
Griffith, Morgan Everett	Wilkesbarre	Pennsylvania.
Hauser, Raymond Jack	Danville	Pennsylvania.
Heller, James Beyel, Jr.	Pottsville	Pennsylvania.

Name.	Post-Office.	State.
Henneberger, Charles Ellsworth	Greencastle	Pennsylvania.
Herbst, William Frederick	Allentown	Pennsylvania.
Hewson, William	Philadelphia	Pennsylvania.
Hobbs, William Henry, Jr.	Martin's Ferry	Ohio.
Hobson, Carl Lyle	Hampton	Iowa.
Hodges, Frederick M.	Linden	North Carolina.
Holt, Edward Zell	Philadelphia	Pennsylvania.
Horn, Harry Taylor	New Paris	Pennsylvania.
Ivey, Ellis Vanderslice	Suffolk	Virginia.
Keating, Peter McCall	Wawa	Pennsylvania.
Kelly, James Raymond	Hornell	New York.
Kimmelman, Louis	Philadelphia	Pennsylvania.
Kirkpatrick, Clarence Appleton	Philadelphia	Pennsylvania.
Klock, Glenn George	Plymouth	New Hampshire.
Landon, Lyndon Holt	DeKalb	New York.
Leigh, Herbert Crozier	Philadelphia	Pennsylvania.
Leinbach, Howard Milton	Mt. Penn	Pennsylvania.
Leitch, John George	Philadelphia	Pennsylvania.
Lewis, Charles Anthony	Steelton	Pennsylvania.
Lewis, Robert Morton	Philadelphia	Pennsylvania.
Lingo, Marvel Smith	Norristown	Pennsylvania.
Loftus, Walter Emmett	Carbondale	Pennsylvania.
Londrigan, Joseph Francis	Hazleton	Pennsylvania.
Lotterhos, George	Crystal Springs	Mississippi.
Luby, Daniel Francis	Peabody	Massachusetts.
McCarthy, Harry Lloyd	Altoona	Pennsylvania.
McIntosh, William Page, Jr.	Portland	Maine.
McKinstry, Guy Hale	Mercer	Pennsylvania.
McKnight, Howard Allison	Philadelphia	Pennsylvania.
McMurrey, Milton William	Cuero	Texas.
McSherry, Emory Ford	Brookville	Ohio.
MacDonald, Ronald Foley, Jr.	Antigonish	Nova Scotia.
Maits, Charles Buckley	Pittsburgh	Pennsylvania.
Maxson, Louis Herbert	Philadelphia	Pennsylvania.
Mays, Thomas Henry	Philadelphia	Pennsylvania.
Merscher, Washington	Germantown	Pennsylvania.
Mitchell, Albert Graeme	Philadelphia	Pennsylvania.
Munroe, William Elmer	Pittsburgh	Pennsylvania.
Nietsch, Lothar	Breslau	Germany.
Noble, Charles Greylock	Philadelphia	Pennsylvania.
Nylin, Josef Benediktus	Stockholm	Sweden.
O'Brien, John Patrick	Philadelphia	Pennsylvania.
Paine, Liston	Galveston	Texas.
Paniagua, Frutos	Chinandega	Nicaragua, C. A.
Penza, John Gennaro	Philadelphia	Pennsylvania.
Pleasants, Henry, Jr.	Wayne	Pennsylvania.
Quinn, Edmund Lennon	Chicago	Illinois.
Raab, F. Henry	Belleville	Illinois.
Reese, LeRoy Joseph	Johnstown	Pennsylvania.
Reese, William Cleveland	Wilkes-Barre	Pennsylvania.
Remer, Daniel Flick	Williamsport	Pennsylvania.
Rivas, Damaso	Philadelphia	Pennsylvania.

Name.	Post-Office.	State.
Robb, Claude Albert	Chicora	Pennsylvania.
Robinson, Charles Irwin	Sharpsburg	Pennsylvania.
Roderick, Richard Davis	Hazleton	Pennsylvania.
Roethke, Rudolph Walter	Chilton	Wisconsin.
Schneller, John Schafer	Catasauqua	Pennsylvania.
Seidel, Victor Israel	Philadelphia	Pennsylvania.
Shapiro, Charles	Philadelphia	Pennsylvania.
Shear, Lewis Maurice	Lancaster	Pennsylvania.
Shelley, Isaac High	Ambler,	Pennsylvania.
Shields, Ellwood Emlen	Germantown	Pennsylvania.
Shull, Joseph Rush	Lincolnton	North Carolina.
Shultz, Charles Lytle	Spruce Creek	Pennsylvania.
Smith, John, Jr.	Mahanoy City	Pennsylvania.
Smith, J. Shober	Steubenville	Ohio.
Speer, William Henry	Wilmington	Delaware.
Sprowl, Frederic Good	Warren	Indiana.
Steckel, Harry Arthur	Trenton	New Jersey.
Stewart, Audley Durand	New Wilmington	Pennsylvania.
Stewart, Lever Flegal	Clearfield	Pennsylvania.
Striegel, John George	Pottsville	Pennsylvania.
Sumner, Robert Ernest	Fletcher	North Carolina.
Swain, Dwight Moulton	Malvern	Iowa.
Thompson, Lloyd LeGrand	N. Washington	Pennsylvania.
Tilton, Walter Sterling	Farmingdale	New Jersey.
Town, Edwin Cunningham	Narberth	Pennsylvania.
Urbina-Guillén, Juan Francisco	Granada	Nicaragua, C. A.
Van Wert, Floyd Lee	New Castle	Pennsylvania.
Watson, Walter	Newbern	North Carolina.
Welliver, William Evan	Bloomsburg	Pennsylvania.
Wenger, John Marshall	Brownstown	Pennsylvania.
Whitham, Lloyd Bankson	Philadelphia	Pennsylvania.
Wiggins, John Carroll	Suffolk	Virginia.
Wilkes, LeRoy Augustus	Philadelphia	Pennsylvania.
Wilson, Constant Perkins, Jr.	Ft. Smith	Arkansas.
Wilson, Homer Tong, Jr.	San Antonio	Texas.
Wood, Percy Hoxie	Memphis	Tennessee.
Woodland, Edward Elias	Dallas	Texas.

At a University Council, held Friday, December 16, 1910, the degree of Doctor of Medicine was conferred upon the following candidate:

Name.	Post-Office.	State.
Bonner, William F.	San Antonio	Texas.

Of the foregoing there were from:

Alabama	1	Maine	1
Arkansas	1	Massachusetts	1
Delaware	1	Minnesota	1
Illinois	3	Mississippi	1
Indiana	1	New Hampshire	1
Iowa	2	New Jersey	4

North Carolina	5	Virginia	3
Ohio	4	West Virginia	1
Pennsylvania	86	Wisconsin	1
South Carolina	1	Foreign	5
Tennessee	1		
Texas	7	Total	135
New York	3		

PRIZES.

THE ALUMNI MEDAL awarded to the member of the Graduating Class who attains the highest general average in examination. To IVOR GORDON CLARK.

THE DR. SPENCER MORRIS PRIZE.—The annual income derived from the investment of Ten Thousand Dollars, awarded each year to that Medical Student of the Graduating Class who shall pass the best examination for the degree of Doctor of Medicine. To JOHN E. B. BUCKENHAM.

The Prize of an Obstetrical Forceps, offered by the Professor of Obstetrics, to the member of the Graduating Class who furnishes the best report of a case of Obstetrics occurring in the University Maternity Hospital. To ROBERT MORTON LEWIS.

THE FREDERICK A. PACKARD PRIZE of One Hundred Dollars, offered by a friend of the University to the member of the Graduating Class who has proven himself to be the most proficient in the course in Clinical Medicine. To PETER MCCALL KEATING.

The Prize of Seventy-five Dollars offered to a member of the Class presenting on or before the Annual Meeting of the Undergraduate Medical Association, 1910, the best essay based upon the results of original investigation in Surgical Anatomy, Surgical Pathology or Surgical Physiology. To LEVER FLEGAL STEWART.

SCHOOL OF MEDICINE.

POST-GRADUATE STUDENTS.

Name.	Residence.	City Address.
Downey, J. O., M. D. (Pennsylvania),	Philadelphia,	Naval Hospital.
Goldstein, Davis W.,	Memphis, Tenn.,	3326 Walnut St.
Hagedorn, Arthur Clesson, M. D. (Albany),	Gloversville, N. Y.	
Huber, George W., M. D. (Pennsylvania),	Scranton.	
Hughes, J., M. D. (Maryland),	Mt. Carmel,	3745 Spruce St.
Hamaker, Wm. B., M. D. (Baltimore Medical),	Philadelphia,	5015 Locust St.
Lindberg, Albert W., M. D. (Chicago College of Medicine & Surgery),	Milwaukee, Wis.,	3704 Spruce St.
Nylin, Josef Benediktus, M. D. (Pennsylvania),	Stockholm, Sweden,	26 S. 21st St.
Noble, Charles Greylock, M. D. (Pennsylvania),	Philadelphia,	Phila. Gen. Hospital.
Parker, Thomas,	Klameth Falls, Ore.,	
Smith, A. B.,	Wellington, Ohio,	3617 Locust St.
Smitheman, Edward Wright, M. D. (Pennsylvania),	Philadelphia,	1234 N. 18th St.
Waters, Henry W., M. D. (Texas),	Montgomery, Texas,	3727 Locust St.
West, Burch C., M. D. (Pennsylvania),	Dayton, Ohio,	3269 Woodland Ave.

FOURTH-YEAR CLASS.

Abramovitz, Max,	Philadelphia,	639 Reed St.
Albrecht, Herman Emil,	do.	4133 Girard Ave.
Alexander, Robert Julian,	do.	5131 De Lancey St.
Andres, John Henry, Jr.,	Bloomsburg,	305 S. 39th St.
Armstrong, James Irons,	Marshallton, Del.,	3815 Spruce St.
Baird, Homer Dale,	Wilkinsburg,	3703 Walnut St.
Baradofsky, Joseph,	Philadelphia,	330 League St.
Batdorf, Claude Wellington,	Harrisburg,	920 N. 42d St.
Bazemore, Bryan Spivey, A. B. and B. S. (Wake Forest),	Windsor, N. C.,	3611 Locust St.
Beall, Louis Girardeau, A. B and A. M. (David- son), M. D. (North Caro- lina Med.),	Greensboro, N. C.,	3812 Locust St.
Bean, James Robbins,	Ashbourne,	Dorm. 30 Wilson.
Beasley, Edward Bruce,	Coleraine, N. C.,	3611 Locust St.
Beckwith, Robert Payne,	Plymouth,	Dorm. 30 Wilson.
Berens, Conrad, Jr.,	Philadelphia,	4232 Chestnut St.
Birdsall, Joseph Cooper, A. B. (Haverford),	S. Starksboro, Vt.,	223 S. 33d St.
Bixby, Edward Welles, A. B. (Princeton),	Wilkes-Barre,	Dorm. 21 Prov. Tower.
Block, Frank Benton,	Philadelphia,	1545 N. 6th St.
Blum, Theodor, D. D. S. (Pennsylvania),	Vienna, Austria,	4014 Baring St.
Boudart, Prosper Joseph, Jr., B. S. (Penna. Military Col- lege),	Chester,	[817 Edgmont Ave.]
Bowen, Albert, A. B. (Rochester),	Rochester, N. Y.,	Dorm. 226 Baldwin.
Bradford, Mark Averill,	Clairton,	3815 Spruce St.
Brown, Evan Inkerman,	Buena Vista,	Dorm. 308 Brooks.

Name.	Residence.	City Address.
Buchanan, John Ure, Jr., B. S. (Penna. Military College),	Youngstown, Ohio,	Dorm. 306 Brooks.
Campbell, George Frank, M. D. (Medico-Chirurgical),	Selbyville, Del., S. Bethlehem, Camden, N. J.,	3341 Woodland Ave. Dorm. 433 Class of '87. [317 Penn St.]
Canning, Austin James, Casselman, Arthur Jay, Cater, Charles Columbus, Jr., B. A. (Atlanta),	Atlanta, Ga., Watertown, N. Y., Economy, Ind.,	26 N. 38th St. Dorm. 34 Bishop White. Dorm. 430 Class of '87.
Chapman, John Patrick, Clark, Solon Worth, Colver, Benton Noble, M. D. (Amer. Missionary Med. Univ. of Ill.),	Battle Creek, Mich., Pittsburgh,	1259 S. 46th St. Dorm. 32 Bishop White.
Crawford, Stanley Ernest, Croll, Walter Lewis, A. B. (Haverford),	Bryn Mawr, Glassport, Pittsburgh,	[Bryn Mawr.] 3703 Walnut St. Dorm. 44 Bodine.
Davis, Emmett, Eynon, John Schofield, Ferrier, Paul Alexander, A. B. (Tarkio),	Tarkio, Mo.,	Dorm. 437 Baird.
Festerling, Edwin Garfield, A. B. (Wisconsin), Flagler, Charles Stewart, Flynn, Charles Watts, Jr., B. S. (Louisiana),	Sheboygan, Wis., Stroudsburg, Monroe, La., Erie,	208 S. 37th St. 3717 Locust St. 26th and Lombard Sts. Dorm. 42 Bishop White.
Flynn, Theobald Matthew M., Galbreath, John Alexander, B. S. (Princeton), A. B. (Lincoln),	Lincoln University, S. Swansea, Mass.,	514 Woodland Ter. Dorm. 42 E. F. Smith.
Gardner, Clifton, Gerhard, Arthur Howell, A. B. (Pennsylvania),	Philadelphia,	57th St. and Overbrook Ave.
Gindy, Fahmy, A. B. (Assiut Training College),	Assiut, Egypt, Philadelphia,	3723 Locust St. 2927 Girard Ave.
Glenn, Robert Alexander, Goff, Byron Heazelton, B. S. (Pennsylvania),	Pittsburgh, do.	Dorm. 32 Prov. Tower. Dorm. 21 Wilson.
Goldstein, Harry Reuben, Gotwals, John Elmer, Grobowski, Casimir Charles, Haines, Wilbur Hamilton, B. S. (Haverford),	Yerkes, Plymouth, Haddonfield, N. J., Philadelphia, Salt Lake City, Utah,	115 S. 34th St. 3815 Spruce St. 4009 Chestnut St. Dorm. 32 Birthday. 3921 Pine St.
Hamrick, Martin Passmore, Hardie, Julian Carter, Hawk, George William, B. S. (Bucknell),	Tower City, Pittsburgh, Tionesta,	3737 Spruce St. Dorm. 254 N. Y. Alumni. 217 De Kalb Sq.
Hayden, Walter George, Henry, Edward Glenn, Hess, Ammon Gross, B. S. (Bucknell),	Manheim, Millville, N. J., Uniontown,	115 S. 34th St. 3815 Spruce St. 3435 Walnut St.
Hess, George Hibbs, Hickey, Joseph Garrett, D. D. S. (Pennsylvania),	Philadelphia, Trenton, N. J.,	1203 S. 46th St. 3261 Sansom St.
Hill, Frederick Edgar, Hoon, Le Roy W., B. S. (Bucknell),	Monongahela, Altoona, Old Mission, Mich., Gastonia, N. C.,	3731 Locust St. Dorm. 104 Brooks. 3412 Sansom St. 3915 Spruce St.
Hunter, William Blair, Jacocks, William Picard, A. B. and A. M. (North Carolina),	Windsor, N. C.,	3609 Locust St.
John, Rutherford Lewis, B. S. (Pennsylvania),	Media, New Hill, N. C.,	3601 Locust St. 3717 Locust St.
Judd, Eugene Clarence,		

Name.	Residence.	City Address.
Kech, Augustus Sheridan, B. S. (Bucknell),	Snow Shoe,	Dorm. 51 Morris.
Kennard, William Sorrento,	Newark, N. J.,	3628 Sansom St.
Kennedy, Foster Harris,	Williamsport,	3703 Walnut St.
Kerns, Thomas Cleveland, A. B. (North Carolina),	Salisbury, N. C.,	3717 Locust St.
Kinloch, Henry Sachtleben,	Charleston, S. C.,	Dorm. 34 Bishop White.
Kitchen, Philip Gordon, B. S. (Penna. Military Col- lege),	Germantown,	[449 Locust Ave.]
Klotz, Fred. Guth, A. B. (Princeton),	Northampton,	Dorm. 31 E. F. Smith.
Krebs, Stanley Aaron,	Mahanoy City,	Dorm. 12 Morris.
Kremer, David Nathaniel,	Philadelphia,	5110 Baltimore Ave.
Krick, William Fritz,	Sinking Spring,	3609 Locust St.
Leavitt, Frederic Headley,	Trenton, N. J.,	Dorm. 330 Franklin.
Leech, Archie Wallace, A. B. (Geneva),	New Sheffield,	3257 Chancellor St.
Lehmann, John Raymond, A. B. (Wooster),	Springdale, Ohio,	Dorm. 43 Class of '87.
Lowry, Walter Thompson, A. B. (Grove City),	Butler,	216 De Kalb Sq.
McClintock, Andrew Todd, A. E. (Princeton),	Wilkes-Barre,	Dorm. 105 Leidy.
McCloskey, Edward William, B. S. (Pennsylvania),	Chestnut Hill,	Dorm. 31 Prov. Tower.
McCormick, Earl V.,	Greensburg,	3743 Spruce St.
McCormick, William Henry, Jr.,	Perth Amboy, N. J.,	Dorm. 31 Morris.
McEntee, Bernard Joseph, A. B. (Mt. St. Mary),	Steelton,	2035 N. 22d St.
McHugh, William Armstead, Jr.,	Uniontown,	Dorm. 224 McKean.
McIntire, Benjamin Mere- dith,	Philadelphia,	4135 Chestnut St.
Macfarlan, Donald, B. S. (Pennsylvania),	do.	1805 Chestnut St.
Macfarlan, Douglas, B. S. (Pennsylvania),	do.	1805 Chestnut St.
MacFarland, James, Jr.,	Burlington, N. J.,	3611 Locust St.
Manier, John Owsley, A. B. (Vanderbilt),	Nashville, Tenn.,	Dorm. 501 Baldwin.
Margolies, Michael,	West Chester,	Dorm. 454 N. Y. Alumni.
Marks, William Le Roy,	Callary,	3729 Spruce St.
Meyerhoff, Irwin Silberblatt,	Coatesville,	1803 N. 17th St.
Middleton, William Shainline,	Norristown,	[530 Buttonwood St.]
Miller, Thomas Grier, A. B. (North Carolina),	Statesville, N. C.,	3601 Locust St.
Monahan, John Sylvester,	Shenandoah,	Dorm. 31 E. F. Smith.
Moore, Fontaine Bruce,	Helena, Ark.,	3533 Locust St.
Mulherin, Francis Xavier, A. B. (College of Sacred Heart),	Augusta, Ga.,	Dorm. 21 E. F. Smith
Narr, Frederick Conrad,	Philadelphia,	1820 S. 12th St.
Newmayer, Harry,	do.	2007 N. 33d St.
Nicholson, Murdoch Allan, B. S. (Minnesota),	Willcox, Ariz.,	213 De Kalb Sq.
Nunn, Sylvanus James,	Orange, N. J.,	3611 Locust St.
Nutt, John Budd, A. B. (Princeton),	Williamsport,	Dorm. 105 Leidy.
Oast, Samuel Poindexter, Jr.,	Portsmouth, Va.,	3601 Locust St.
Oliensis, Abraham Elijah,	Philadelphia,	1137 N. Union St.
O'Neil, James William,	Fall River, Mass.,	Dorm. 53 Rodney.
O'Neill, Francis Calistus,	Wilkes-Barre,	Dorm. 224 McKean.
Parry, John Rogers, Jr.,	Woodsfield, Ohio,	3610 Walnut St.
Parsons, Isaac Ivison,	Media,	[Media.]
Peace, Elber Brodhead,	Port Norris, N. J.,	Dorm. 433 Class of '87
Pellett, Thomas Lawrence,	Hamburg, N. J.,	3703 Walnut St.
Pemberton, John de Jarnette, B. A. (North Carolina),	Raleigh, N. C.,	3601 Locust St.
Pinckney, Frank Huger,	Philadelphia,	3619 Locust St.

Name.	Residence.	City Address.
Piper, Edmund Brown, B. S. (Princeton),	Williamsport,	6300 Overbrook Ave.
Ratliff, Thomas Asbury, B. A. (Pennsylvania),	Dayton, Ohio,	3641 Locust St.
Reckord, Frank Frederick Dunott,	Harrisburg,	3607 Locust St.
Reeves, John Franklin, B. A. (Pennsylvania),	Bridgeton, N. J.,	Dorm. 437 Baird.
Riston, Paul A.,	Reynoldsville,	3267 Sansom St.
Roncovieri, Alfred, Jr.,	San Francisco, Cal.,	Dorm. 40 Birthday.
Root, Aldert Smedes, B. S. (North Carolina),	Raleigh, N. C.,	3601 Locust St.
Ross, Albert Howard, M. D. (Amer. Missionary Med. Univ. of Ill.),	Phoenix, Ariz.,	1259 S. 46th St.
Ruben, Samuel Abraham,	Washington,	Dorm. 54 Rodney.
Rullman, Walter Ames	Annapolis, Md.,	Dorm. 326 Franklin.
Ryan, William John,	Philadelphia,	2035 N. 22d St.
Sanchez, Julian,	Camaguey, Cuba,	3727 Spruce St.
Scanlan, David Ward,	Atlantic City, N. J.,	3611 Locust St.
Scarlett, Hunter Watt, B. S. (Pennsylvania),	Erie,	Dorm. 22 Prov. Tower.
Schnabel, Truman Gross, A. B. (Lehigh),	Bethlehem,	3731 Locust St.
*Scott, Le Roy,	Denver, Colo.,	208 S. 37th St.
Sloan, Henry Lee, A. B. (North Carolina),	Ingold, N. C.,	3601 Locust St.
Smiles, Clyde Jeffrey,	Pittston,	26th and Lombard Sts.
Smith, Charles Franklin,	Schofer,	Dorm. 48 Rodney.
Smith, Frederick Ashworth,	Providence, R. I.,	Dorm. 43 Prov. Tower.
Smith, James Augustus,	Reading,	920 N. 42d St.
Smythe, William Arthur,	Avoca,	260 S. 38th St.
Spicer, Richard Williams, M. D. (North Carolina Med.), B. S. (Davidson),	Goldsboro, N. C.,	3812 Locust St.
Steffler, Samuel Sheldon,	Pittsburgh,	Dorm. 252 N. Y. Alumni.
Stein, Harry Charles,	Poughkeepsie, N. Y.,	1810 N. 31st St.
Suarez y Gonzalez, Jose Manuel,	Ponce, Porto Rico,	Dorm. 12 Bishop White.
Swalm, William Albert,	Philadelphia,	2548 N. 8th St.
Sweeney, Leon Gabriel,	Wilkes-Barre,	Dorm. 32 Rodney.
Terrill, Truman C.,	Ranger, Texas,	3330 Walnut St.
Thompson, Edward Gilmer, A. B. (Vanderbilt),	Marianna, Ark.,	Dorm. 501 Baldwin.
Throne, James Elwood,	York,	Dorm. 54 Rodney.
Tobey, Franklin Joseph,	Brockton, Mass.,	3610 Walnut St.
Trager, Herman,	Atlantic City, N. J.,	3275 Sansom St.
Updegrove, Harvey Claude, A. B. (Lafayette),	Easton,	3731 Locust St.
Webb, Lanphear Wesley, Jr.,	Philadelphia,	Dorm. 27 Graduate.
Wilson, George,	Erie,	3301 Arch St.
Wilson, Luther Elgin, B. S. (Pennsylvania),	Birmingham, Ala.,	3610 Walnut St.
Winslow, Harry Charles,	Bennezette,	217 De Kalb Sq.
Yeager, Clark Harvey,	Plymouth,	3703 Walnut St.
Young, William James,	Boston, Mass.,	Dorm. 50 Rodney.

THIRD-YEAR CLASS.

Albright, Markley Connel, A. B. (Gettysburg),	Hatfield,	3707 Locust St.
Alexander, John Harrison,	New Castle,	3611 Locust St.
Artman, Edward Louis, Jr.,	Philadelphia,	1432 N. 17th St.
Bagenstose, Harry William,	West Leesport,	3643 Locust St.
Bailey, Harry Francis, B. S. (Bucknell),	Monongahela,	3737 Spruce St.
Barnes, William Henry,	Philadelphia,	401 S. 21st St.
Bedrossian, Edward Hagop, A. B. (Anatolia),	Marsovan, Turkey,	3803 Spruce St.
Bell, Howard Homer,	Lewistown,	1700 N. 52d St.

*Deceased.

Name.	Residence.	City Address.
Boles, Russell Sage,	Wynnewood,	3400 Walnut St.
Bowman, Paul Newkirk,	Reading,	Dorm. 32 Mask & Wig.
Brachman, David Simon,	Philadelphia,	2116 South St.
Bradner, Maurice Renfrew,	Warwick, N. Y.,	3601 Locust St.
Bromer, Ralph Shepherd B. A. (Yale),	Schwenksville,	5025 Catharine St.
Brown, Henry Paul, Jr., E. S. (Pennsylvania),	Germantown,	[128 W. Upsal St.]
Bruce, James White, A. B. (Yale),	Louisville, Ky.,	Dorm. 305 Philips Brooks.
Burleigh, Charles Carroll,	Merchantville, N. J.,	Dorm. 14 Rodney.
Cabrera, Esteban Garcia, Jr.,	San Juan, Porto Rico,	111 S. 34th St.
Campbell, Stephen,	Philadelphia,	1545 S. Broad St.
Carley, Arthur Ward,	Ayer, Mass.,	268 S. 38th St.
Collins, Arthur Aldridge, A. B. (Lincoln),	Oxford,	3265 Sansom St.
Cook, Thomas Wood, Jr.,	Selma, Ohio,	1700 N. 52d St.
Darrah, Leon Calvin,	Reading,	3609 Locust St.
Denelsbeck, Julius Otis,	Trenton, N. J.,	3261 Sansom St.
Dickson, John McCrea, B. S. (Gettysburg),	Gettysburg,	3737 Spruce St.
Diller, Isaac Slaymaker, A. B. (Franklin & Mar- shall),	Lancaster,	3502 Spring Garden St.
Diven, John, A. B. (Indiana),	Anderson, Ind.,	3601 Locust St.
Doe, Charles Herbert,	Philadelphia,	4509 Sansom St.
Donlan, Francis Albert Ben- nett,	Shamokin,	3601 Locust St.
Draper, Edgar Arthur,	Philadelphia,	2109 Fitzwater St.
Dunn, Archibald Wallace,	Auburn, Me.,	3473 Sansom St.
Edwards, Thomson Ford, Jr.,	Philadelphia,	906 S. 47th St.
Evans, William Benedict,	Chester,	[1215 Edgmont Ave.]
Farrior, James William, M. E. (Cornell), B. E. (North Carolina College of Agriculture and Mechan- ical Arts),	Kenansville, N. C.,	3609 Locust St.
Fields, Sterling Otellus,	Newport News, Va.,	Dorm. 25 Morgan.
Fish, Ezra Simpson, B. S. (California),	Los Angeles, Cal.,	Dorm. 37 Robt. Morris.
Gilmore, James Lee, A. B. (Westminster),	Turtle Creek,	3729 Spruce St.
Godfrey, Rush Clayton, B. S. (Wisconsin),	Lancaster, Wis.,	3220 Chestnut St.
Goldberg, Leo,	Philadelphia,	913 Ritner St.
Graves, Richard Alexander,	Presque Isle, Me.,	3737 Spruce St.
Groh, John Lick,	Lebanon,	3815 Spruce St.
Halprin, Abram,	Philadelphia,	4906 Lancaster Ave.
Hanley, Paul Dawson,	Pottstown,	3615 Locust St.
Hanson, Edward Kelly,	Perth Amboy, N. J.,	3610 Walnut St.
Hawk, David Jackson, B. S. (Bucknell)	Tower City,	3737 Spruce St.
Hellman, Adam George, Ph. B. (Franklin & Mar- shall),	Lebanon,	Dorm. 104 Brooks.
Helm, John Daniel, A. B. (Franklin & Mar- shall),	New Providence,	3611 Locust St.
Hirsch, Otto Christian,	Philadelphia,	3611 Locust St.
Hopkinson, Richard Dale,	do.	1424 Spruce St.
How, Harold Waldron,	New York, N. Y.,	Dorm. 201 Brooks.
Howell, Gideon Lyman,	Trucksville,	3256 Chestnut St.
Jaspan, Samuel Clemens,	Philadelphia,	757 S. 5th St.
Keeler, Russell R.,	Harleysville,	3703 Walnut St.
Kerr, Harry James,	Homestead,	Dorm. 33 Morris.
Kessler, John Donovan,	Logan, Ohio,	2545 Brown St.
Ketterer, Clarence Henry,	Butler,	Dorm. 40 Rodney.
Keyting, Walter Scott,	Salt Lake City, Utah,	Dorm. 114 Foerderer.
King, Clapham Price,	Annapolis, Md.,	Dorm. 451 N. Y. Alumni.

Name.	Residence.	City Address.
King, Edward Ambrose, A. B. (St. Francis Xavier),	Scottdale, Philadelphia,	3601 Locust St. 3328 N. Broad St.
Klauder, Joseph Victor, Kleinhans, Paul Howard, Ph. B. (Lafayette),	Easton,	3533 Locust St.
Kroh, Laird Franklin, Ph. B. (Grove City),	Rural Valley, Syracuse, N. Y.,	3713 Woodland Ave. 3815 Spruce St.
Larned, Samuel Francis, Lewis, John Francis, Jr., A. B. (St. Joseph),	Philadelphia,	6024 Haverford Ave.
Lick, Maxwell John, A. B. (Allegheny),	Albion,	Dorm. 41 Rodney.
Llewellyn, Thomas Henry, B. A. (Mt. Allison),	Paget, W. Bermuda, Key West, Fla.,	3708 Spruce St. 3815 Spruce St.
Lowe, Eugene Clayton, Lowenthal, Abraham Isador, Lupin, Edward Emanuel, B. S. (Pennsylvania),	Philadelphia, do.	1207 Belmont Ave. Dorm. 21 Mem. Tower.
McCain, Gilpin Montieith, B. S. (Washington & Jef- ferson),	Kittanning, Elverson, Wilkes-Barre, Millville, N. J., Knoxville, Tenn.,	Dorm. 10 Bishop White. Dorm. 52 Mem. Tower. 3703 Walnut St. Dorm. 38 Morris. Dorm. 36 Mask & Wig.
McCord, Clinton Preston, McGinley, Joseph Leo, McHenry, Robert Newcomb, McNabb, Paul Edgar, Magoffin, Montrose Bovard, A. B. (Princeton),	Mercer, Brooklyn, N. Y.,	Dorm. 22 Morris. 3435 Walnut St.
Manzella, Joseph Anthony, Markel, Ralph Montgomery, Ph. B. (Franklin & Mar- shall),	Sunbury,	Dorm. 41 Coxe.
Marks, Philip Edward, A. B. (Washington & Jef- ferson),	Braddock,	Dorm. 53 E. F. Smith.
Marshall, Edward Humphrey, Ph. B. (Grove City),	Butler, Chestnut Hill, Pittsburgh,	3615 Locust St. [Chestnut Hill.] 3223 Sansom St.
Martin, Sergeant Price, Mayer, William Henry, Monaghan, William Anthony, Moore, John Walker, B. S. (Davidson),	Bristol, Conn., McConnellsville, S. C.,	Dorm. 47 Robt. Morris. 3723 Locust St. 3340 Walnut St.
Mumma, Harry Getz, Murdock, Dennis Ray, Newcomet, Harry Isaac, O'Boyle, Cyril Patrick, Pearl, Jacob, Peters, Charles Orley, A. B. (Allegheny),	Waynesburg, Reading, Scranton, Wissahickon, Albion, Philadelphia,	Dorm. 39 Robt. Morris. Dorm. 42 Prov. Tower. Dorm. 53 Coxe. [160 Walnut La.] Dorm. 44 Rodney.
Pike, Charles Edward P., Pike, Charles Heyfield, Presper, Elmer John, Procter, Jewell Beauchamp, B. S. (Vanderbilt),	Boston, Mass., Philadelphia, Franklin, Ky.,	7242 Woodland Ave. 3915 Pine St. 2307 Frankford Ave. Dorm. 33 Mask & Wig.
Reeves, Rufus Sargent, B. S. (Pennsylvania), Raymond, Robert Percy, A. B. (Louisiana),	Philadelphia, Baton Rouge, La.,	1525 Spruce St. Dorm. 36 Mask & Wig.
Rickert, Wilbur Paul, Rockwell, George Ward, Ph. D. (Pennsylvania), B. S. (Buchtel),	Harrisburg, Akron, Ohio, Youngstown, Ohio, Reedsville, Philadelphia, Dunnellon, Fla., Newark, N. J., Conshohocken,	Dorm. 50 Mem. Tower. Dorm. 416 Franklin. Dorm. 234 Baird. 3739 Spruce St. 1832 N. 17th St. 3715 Locust St. Dorm. 11 Wilson. 3610 Walnut St.
Rosenblum, Alex Morton, Rothrock, Arthur Crawford, Rothschild, Norman Stanley, Rubin, Harry, Russell, Leslie Crawford, Ruth, Aaron Leidy, Schaffner, Gerald Frederic, D. D. S. (Pennsylvania), Schildkraut, Jacob Max, Schmitz, Edgar F.,	Florence, Italy, Trenton, N. J., St. Louis, Mo.,	3419 Walnut St. 3261 Sansom St. Dorm. 226 Baldwin.

Name.	Residence.	City Address.
Schwartz, Philip Herman,	Hazleton,	3711 Woodland Ave.
Segal, Louis,	Philadelphia,	1807 N. 31st St.
Shookers, Tobias Cletus,	Mountville,	3340 Walnut St.
Simpson, John Christopher,	Philadelphia,	805 N. 11th St.
Simpson, Sumner Clelland,	McKeesport,	3605 Locust St.
Sisney, Thomas La Vere,		
A. B. (Grove City),	Boyers,	Dorm. 32 Robt. Morris.
Smith, Daniel Arthur, Jr.,		
B. S. (Mass. Institute of Technology),	Newport, R. I.,	[1014 King St., Wilmington, Del.]
Smock, Irwin Bradfield,	Philadelphia,	3330 Chestnut St.
Stansfield, Oliver Holt,	Amsterdam, N. Y.,	Dorm. 52 Coxe.
Stevenson, William Wyckoff,	Trenton, N. J.,	Dorm. 329 Franklin.
Strode, George King,		
B. S. (Haverford),	West Chester,	[314 S. Walnut St.]
Sweeney, John Francis, Jr.,	Buffalo, N. Y.,	Dorm. 20 Birthday.
Thomas, Alfred Robert, Jr.,	Philadelphia,	3411 N. 15th St.
Thomas, David Wesley,	Weedville,	217 De Kalb Sq.
Tidd, Charles H.,	Effort,	3703 Walnut St.
Toland, John Hart,		
A. B. (St. Joseph),	Philadelphia,	2526 S. Broad St.
Vance, Benjamin Morgan,		
A. B. (Harvard),	Louisville, Ky.,	Dorm. 307 Brooks.
Vogt, David Mays,		
B. S. (Albright),	Prescott,	3340 Walnut St.
Wahl, John Carl,	Scranton,	Dorm. 54 Robt. Morris.
Walker, Ralph Ward,	Butler,	Dorm. 20 Rodney.
Walter, Max Johannes,	Philadelphia,	1711 Green St.
Wells, James Ralston,	do.	754 N. 40th St.
Wolferth, Charles Christian,		
A. B. (Princeton),	Clarksboro, N. J.,	Dorm. 334 Franklin.
Zinsser, Harry Frederick,		
B. S. (Pennsylvania),	Pittsburgh,	3610 Walnut St.

SECOND-YEAR CLASS.

Adams, Erick Archibald,	Wilkes-Barre,	3717 Spruce St.
Allis, Paul Mitten,	Wyalusing,	Dorm. 21 Rodney.
Armstrong, Thomas Morrell,	Philadelphia,	1430 Christian St.
Bacharach, Daniel,	do.	1725 N. 33d St.
Bailey, Frank Raymond,		
B. S. (Westminster),	Xenia, Ohio,	3729 Spruce St.
Ballou, De Forrest, Jr.,	Cynwyd,	[Cynwyd.]
Barnes, Frederick Rigby, Jr.,	Norristown,	4130 Chester Ave.
Barrett, Martin Clement,	Kane,	3611 Locust St.
Boyd, Samuel Harold,		
A. B. (Pennsylvania),	Hensel,	Dorm. 424 McKean.
Branham, Vernon,	Denver, Colo.,	3236 Chestnut St.
Bransfield, John William,	Portland, Conn.,	3611 Locust St.
Bridgers, Robert Rufus,		
A. B. (North Carolina),	Wilmington, N. C.,	3601 Locust St.
Burney, Thomas Morrison,	Portland, Ore.,	3605 Locust St.
Buschmann, Trygve Wedege,	Seattle, Wash.,	Dorm. 351 Baldwin.
Cannon, Raymond Joseph		
Aloysius,	Allentown,	2319 N. Howard St.
Carpenter, James Stratton,		
Jr., A. B. (Trinity),	Pottsville,	Dorm. 213 Foerderer.
Carroll, Joseph Peter	Philadelphia,	1703 N. 15th St.
Carskadden, Henry Adam,	Williamsport,	3256 Chestnut St.
Ceres, Frederick,	Newark, N. J.,	Dorm. 402 Brooks.
Chandler, Swithin,	Wilmington, Del.,	3703 Walnut St.
Cohen, Herman Bernard,	Philadelphia,	5305 Market St.
Cox, Ora Howard,		
B. S. (Whitman),	Machias, Wash.,	3617 Locust St.
Crossan, Edward Thomas,	Wilmington, Del.,	[308 King St.]
Dannenberg, Arthur Mansbach,		
Philadelphia,		1747 N. 33d St.
Day, Elbert Osborne,		
A. B. (Hamilton),	Red Creek, N. Y.,	2131 Fitzwater St.

Name.	Residence.	City Address.
Denney, Oswald Evans,	Smyrna, Del.,	35th and Spring Garden Sts.
Dewey, Michael George,	Ashland,	564 N. 23d St.
Dietrich, Paul Henry,	Kutztown,	120 S. 34th St.
Dobbins, Royal Bolton,	Narberth,	[Narberth.]
Doig, Rolland Barkley, B. S. (Pennsylvania),	Greenwich, N. Y.,	3611 Locust St.
Donovan, Cornelius Charles, Jr.,	Scranton,	3611 Locust St.
Dreifus, Percy,	Lititz,	Dorm. 14 Morgan.
Drinker, Cecil Kent, B. S. (Haverford),	S. Bethlehem,	2321 Spruce St.
Dunn, William Thomas, B. S. (Pennsylvania State College),	State College,	3703 Walnut St.
Ewing, Harvey Milligan, B. S. (Pennsylvania),	Montclair, N. J.,	Dorm. 52 Prov. Tower.
Fisher, Fred., Jr.,	Kane,	3928 Pine St.
Gaughan, Robert Aloysius,	Hazleton,	3727 Spruce St.
Harrington, Stuart William,	Du Bois,	3705 Walnut St.
Harris, Tom Ferdinand,	Morris, Minn.,	Dorm. 45 Mem. Tower.
Harrison, Francis Grillet,	Philadelphia,	29 N. Farson St.
Hewson, John Percival,	Orange, Texas,	3815 Spruce St.
Hickman, Harry Chalmers,	Wilmington, Del.,	3400 Walnut St.
Howell, William Horace,	Morrisville,	Dorm. 368 Hopkinson.
Hupp, John Cox,	Wheeling, W. Va.,	Dorm. 36 Morgan.
Jacobsen, Rafael, B. S. and L. (Havana In- stitute),	Havana, Cuba,	4042 Walnut St.
Jacobosky, Cyrus,	Wilkes-Barre,	3603 Locust St.
Johnston, James Renfrew, Jr., B. S. (Wooster),	Coshocton, Ohio,	Dorm. 333 Franklin.
Kilduffe, Robert Anthony, 3d, A. B. (St. Joseph),	Philadelphia,	2510 S. Broad St.
Leiser, William, 3d, A. B. (Bucknell),	Lewisburg,	Dorm. 36 Coxe.
Lewis, Thomas Krapfel, B. S. (Haverford),	Merchantville, N. J.,	3601 Locust St.
Long, William Samuel, A. B. (Ursinus),	Weatherly,	3309 Walnut St.
Longaker, Edwin Pancoast,	Philadelphia,	1402 N. 16th St.
Lynch, Frank Bruce, Jr.,	do.	426 N. 41st St.
McCarthy, Cornelius Theo- dore,	do.	6 S. 38th St.
McEvoy, Frank Edward, B. S. (Pennsylvania),	Providence, R. I.,	Dorm. 360 Craig.
McNamee, Edgar Paul,	Butler,	Dorm. 35 Birthday.
McNeer, Thomas Theodore,	Dante, Va.,	3611 Locust St.
Martin, Alexander Tertius, B. S. (Princeton),	Germantown,	[155 W. Walnut La.]
Mellon, George Walworth,	Monaca,	3610 Walnut St.
Mercer, Eugene Le Roy,	Mendenhall,	23 S. 34th St.
Moore, Lawrence Clayton, A. B. (Haverford),	Ercildoun,	3601 Locust St.
Nedurian, Vram S.,	Egin, Turkey in Asia,	107 S. 34th St.
Norris, Scott Allan,	Homestead,	2110 Green St.
O'Brien, Leo Sullivan, A. B. (Rochester),	Rochester, N. Y.,	216 St. Mark's Sq.
Padilla, Alfonso,	Ponce, Porto Rico,	Dorm. 48 Coxe.
Parsons, Percy Paul, A. B. (Allegheny),	New Castle,	3833 Hamilton St.
Prosser, William Oscar Hampton, A. B. (Oregon),	Eugene, Ore.,	3610 Walnut St.
Ramsey, Frank McCracken, B. S. (Haverford),	Sterling, Kans.,	3601 Locust St.
Redmond, John Lawrence,	Corpus Christi, Texas,	242 S. 44th St.
Reimann, Stanley Philip,	Philadelphia,	945 N. 5th St.
Reiners, Charles Robert,	Huntingdon,	3610 Walnut St.
Robertson, James Farish, Jr., A. B. (Virginia),	Charlotte, N. C.,	3601 Locust St.

Name.	Residence.	City Address.
Rogers, Lewis Leonidas, Jr.,	Kingston,	3229 Sansom St.
Samuel, Edmund Roger,	Mt. Carmel,	3703 Walnut St.
Sauer, Paul Kurt,	El Paso, Texas,	3703 Walnut St.
Semmelrock, William Henry,	Pittsburgh,	3815 Spruce St.
Sheehan, William Coronado,	Philadelphia,	3601 Locust St.
Shields, George Patrick,	Oil City,	3703 Walnut St.
Shivers, Charles Henry de		
Turck,	Atlantic City, N. J.,	3703 Walnut St.
Silvester, Willis Wilson, Jr.,	S. Norfolk, Va.,	Dorm. 11 Rodney.
Spahr, Richard Rockafellow,	Mechanicsburg,	3537 Locust St.
Sprowl, Raymond John,	Warren, Ind.,	Dorm. 213 Foerderer.
Steinfeld, Edward,	Philadelphia,	2231 N. 33d St.
Summa, Frank Paul,	Kingston,	3605 Locust St.
Sweet, Ralph Lincoln,		
B. S. (Kansas Wesleyan),	Salina, Kans.,	[Langhorne.]
Taylor, Frederick Raymond,		
B. S. (Haverford),	Haverford,	Dorm. 115 Foerderer.
Teufel, Walter Casper,	Hazleton,	3727 Spruce St.
Villalobos, Nilo,		
B. H. (Liceo de Heredia,		
Costa Rica),	Heredia, Costa Rica,	3714 Locust St.
Weber, John Francis,	Florence, N. J.,	Dorm. 36 Bishop White.
Wells, Frank Happersett,		
Ph. B. (Lafayette),	Chester Springs,	3617 Locust St.
Wiant, Meade,		
B. S. (Grove City),	Rimersburg,	121 S. 34th St.
Work, Philip,		
B. S. (Pennsylvania),	Pueblo, Colo.,	225 S. 37th St.

FIRST-YEAR CLASS.

Andreae, Paul Otto Mahr,	Jersey City, N. J.,	3815 Spruce St.
Bernett y Cordova, Raul,		
B. Ph. and L. (Bolivar),	Carthagena, Colombia,	
	S. A.,	3405 Woodland Ave.
Bergstein, Alfred Morton,	Pottsville,	2009 N. 8th St.
Bolivar, Luis Napoleon,		
B. Ph. and L. (Bolivar),	Monpox, Colombia,	
	S. A.,	3405 Woodland Ave.
Broomall, Harold Shoemaker,	Chester,	225 S. 37th St.
Buckingham, Robert Beverly,	Memphis, Tenn.,	3533 Locust St.
Buzby, Benjamin Franklin,	Swedesboro, N. J.,	Dorm. 11 Bodine.
Callis, Henry Arthur,		
A. B. (Cornell),	Indianapolis, Ind.,	1639 Stiles St.
Chaney, Ralph Hill,		
A. B. (Oberlin),	Washington, D. C.,	3305 Woodland Ave.
Cole, Charles James, Jr.,		
B. A. (Pennsylvania),	Elkins Park,	3415 Walnut St.
Conover, John Roy,	Atlantic City, N. J.,	22 N. 50th St.
Donnelly, John Devlin,		
A. B. (La Salle),	Philadelphia,	Old York Rd. and 69th Ave.
Entwisle, Robert Morgan,		
B. S. (Princeton),	Johnstown,	Dorm. 42 Birthday.
Felton, William Scott,	Philadelphia,	5305 Oxford Pike.
Frank, Louis Wallace,		
A. B. (Center College),	Louisville, Ky.,	Dorm. 316 Leidy.
Fussell, George Dock,		
B. A. (Swarthmore),	Roxborough,	[421 Lyceum Ave.]
Green, Henry Larkin,		
B. S. (Louisiana),	Oakland, La.,	3422 Sansom St.
Higgs, Charles J.,	Wilkes-Barre,	3603 Locust St.
Immerman, Samuel Leon,	Philadelphia,	714 Dickinson St.
Jalbuena y Benedicto, Jose,		
A. B. (Ateneo de Manila)	Jaro, Iloilo, P. I.,	7104 Woodland Ave.
Keller, Joseph Charles,		
B. A. (St. Mary, Belmont,		
N. C.),	Philadelphia,	3709 Germantown Ave.
Kendall, Raymond Miner,	Waterford,	22 N. 50th St.
Kendrick, George Walter,	Atlantic City, N. J.,	3815 Spruce St.

Name.	Residence.	City Address.
Kern, Richard Arminius, A. B. (Pennsylvania),	Taborton, N. Y.,	3408 Sansom St.
Kleckner, Martin Selser, B. S. (Muhlenburg),	Allentown,	Dorm. 10 Morris.
Kraemer, Harry Michael, Krug, Bernard McDowell,	Scranton,	3449 Woodland Ave.
A. B. (Washington & Lee),	Sao Paulo, Brazil,	3403 Walnut St.
Lane, Franklin Fayette,	Philadelphia,	1925 Chestnut St.
Leopold, Simon Stein,	do.	1428 N. Broad St.
Levering, James Walter,	do.	2028 N. 15th St.
Logue, James Gibson,	Williamsport,	3331 Walnut St.
Loughridge, Jonathan Ed- wards,		
A. B. (Williams),	Peoria, Ill.,	Dorm. 344 McKean.
McConnell, Edward Ford, A. B. (Central Univ. of Kentucky),	Danville, Ky.,	Dorm. 41 Bishop White.
McCullough, Clarence Joseph,	Pittsburgh,	3603 Locust St.
McNett, James Santee,	Hornell, N. Y.,	Dorm. 124 Baldwin.
MacMaster, Percival Z., B. Ph. and L. (Bolivar),	Carthagena, Colombia, S. A.,	221 S. 38th St.
Maerker, Karl Roland, B. S. (Dartmouth),	Napoleon, Ohio,	3803 Spruce St.
Masonheimer, Willard Charles A. B. (Lafayette),	Weatherly,	3309 Walnut St.
Mattson, William W.,	Seattle, Wash.,	3706 Locust St.
Miliikin, Harry William, B. S. (Waynesburg),	Waynesburg,	Dorm. 40 Bodine.
Milnor, Guy Champion, B. S. (Albright),	Warrensville,	3331 Walnut St.
Nafey, Herbert William, B. S. (Rutger's),	New Brunswick, N. J.,	Dorm. 348 McKean.
Narrigan, Clifford Young,	Narberth,	[118 N. 6th St.]
Nash, James Lewis Hatton, Pacheco y Chaverri, Oscar, B. S. and A. (Liceo de Heredia),	Portsmouth, Va.,	Dorm. 30 Birthday.
Passolano, Frank John, Peden, James Clark, B. S. (Davidson),	Heredia, Costa Rica, New Kensington,	3714 Locust St. 124 S. 34th St.
Perrott, Edwin William, Jr.,	Fountain Inn, S. C.,	3721 Locust St.
Robinson, Burnett,	Philadelphia,	3415 Walnut St.
Rubin, Robert William,	Langley, Va.,	26 N. 38th St.
Schafer, Charles Solomon,	Philadelphia,	2243 S. 9th St.
Schumm, Herman Charles,	do.	2222 Ridge Ave.
Shearer, Herbert Benjamin,	Fort Hamilton, N. Y.,	3621 Locust St.
Silman, Charles Norman, B. S. (Bucknell),	Dublin,	647 S. Conestoga St.
Simons, Isaac Shirk, A. B. (Franklin & Mar- shall),	St. Mary's,	Dorm. 47 E. F. Smith.
Smith, Gibson,	Mt. Joy,	3236 Chestnut St.
South, John Joseph,	Philadelphia.	Dorm. 202 Brooks.
Spangler, John Luther,	Bridgeport, Ohio,	Dorm. 124 Baldwin.
Sturgis, Samuel Booth,	York,	Dorm. 202 Brooks.
Sullivan, Harry Gross,	Roxborough,	[488 Green La.]
Szlapka, Thaddeus Louis,	Philadelphia,	4833 Hazel Ave.
Taylor, James Swan, A. B. (Princeton),	Sheeder,	Dorm. 321 Leidy.
Tebbetts, Herbert Edwin, B. S. (Earlham),	Altoona,	Dorm. 34 Birthday.
Thompson, Hugh Alexander, A. B. (North Carolina),	Richmond, Ind.,	Dorm. 314 Leidy.
Turner, John Hazelett, 3d, Underhill, Eugene, Jr., A. B. (Swarthmore),	Raleigh, N. C.,	Dorm. 223 McKean.
Walker, Robert Carroll, B. S. (Davidson),	Lancaster,	224 S. 45th St.
	Swarthmore,	[Swarthmore.]
	Waycross, Ga.,	114 S. 34th St.

Name.	Residence.	City Address.
Willson, Harry Leigh, B. S. (Whitman),	Idaho Falls, Idaho,	3617 Locust St.
Winkelman, Nathaniel, Wood, Emlen,	Philadelphia,	2963 Frankford Ave.
A. B. (Pennsylvania),	do.	3537 Locust St.

SPECIAL STUDENTS FOR TROPICAL MEDICINE COURSE.

Morris, Harold H., M. D. (Pennsylvania),	Philadelphia,	1619 Arch St.
Wanless, W. J., M. D. (New York),	Miraj, S. M. C., India,	3801 Spruce St.

COURSES IN PUBLIC HEALTH.

Lyster, William J., Ph. B. (Michigan), M. D. (Detroit),	Washington, D. C.,	The Tracy, 36th above Chestnut St.
Johnston, John Anderson, M. D. (Pennsylvania),	Trenton, N. J.,	1706 Chestnut St.

SUMMARY.

Post-Graduate Students	14
Students of the Fourth-year Class	154
Students of the Third-year Class	129
Students of the Second-year Class	92
Students of the First-year Class	70
* Special Students	4

Total 463

* 2 in Tropical Medicine, 2 in Public Health.

MEDICAL CALENDAR FOR 1911-1912.

1911

- June 22, Thursday..... *Registration of Candidates for Admission: 9 A. M.
- June 22, Thursday Entrance Examinations: 9 A. M.
- Sept. 21, Thursday *Registration of Candidates for Admission: 9 A. M. to 11 A. M.
- Sept. 21, Thursday Entrance Examinations begin: 9 A. M.
- Sept. 25, Monday Competitive Examinations for Medical Scholarships begin: 10 A. M.
- Sept. 25, Monday Examination for Admission to Advanced Standing begins: 2 P. M.
- Sept. 25, Monday Re-examinations begin: 2 P. M.
- Sept. 29, Friday Session begins: 8 P. M.
- Nov. 29, Wednesday Thanksgiving Recess begins: 6 P. M.
- Dec. 4, Monday Thanksgiving Recess ends: 9 A. M.
- Dec. 22, Friday Christmas Recess begins: 6 P. M.

1912

- Jan. 3, Wednesday Christmas Recess ends: 9 A. M.
- Jan. 29, Monday Mid-Year Examinations begin: 9 A. M.
- Feb. 22, Thursday University Day: Recess.
- April 4, Thursday Easter Recess begins: 6 P. M.
- April 9, Tuesday Easter Recess ends: 9 A. M.
- May 6, Monday Last day for receipt of Prize Essays and Reports.
- May 27, Monday Final Examinations, Fourth-Year Class, begin.
- June 3, Monday Final Examinations, other Classes, begin
- June 19, Wednesday Commencement: 11 A. M.

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